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NORWEGIAN AGRICULTURE . . . . .

By Claudia Thomson*

Norway is in reality a huge rock, parts of which through eons of time have developed forests and soil. Only 3 percent of the surface is cultivable, and a large part of even this 3 percent required arduous labor before it could be made to produce agriculturally. Known Norwegian agriculture dates farther back than 1,000 B. C. In 1800, about 80 percent of the total population of 883,487 derived a livelihood from the soil. At present fully 40 percent of the population of 2,907,000 still lives by agriculture and the allied industries, forestry and fishing. A visitor to Norwegian agricultural areas finds the agriculture of the country unique and the philosophy of the farm people refreshing.

PHYSICAL BASIS OF NORWEGIAN AGRICULTURE

LOCATION AND SURFACE

Norway is located between 58° and 71° north latitude, or in almost exactly the same latitude as Alaska, with nearly one-half of the length of the country north of the Arctic Circle. Norway lies directly east of the southern half of Greenland. The total area, exclusive of Spitzbergen, is about 125,000 square miles (80 million acres) and is slightly smaller than the two States of Minnesota and Iowa. About one-fourth of the area of the country is made up of 150,000 islands sprinkled along the west coast. These islands range in size from one just large enough for the nest of a seafowl to one in the Lofoten group north of the Arctic Circle of 870 square miles. About one-fourth of the population lives on these islands.

The length of the country north and south in a straight line is about 1,100 miles. If the innumerable indentations and fjords of the coast line are followed, the length is more nearly 1,700 miles. From east to west the country is about 250 miles wide in the widest portion in the southern part of the country, while the northern part ranges between 60 and 80 miles in width.

* Bureau of Agricultural Economics. This article, first published in the *Journal of Geography*, May 1936, has been expanded and brought up to date with the permission of the editor of the *Journal*. The statistical tables were compiled by Elizabeth M. Styles, Bureau of Agricultural Economics.

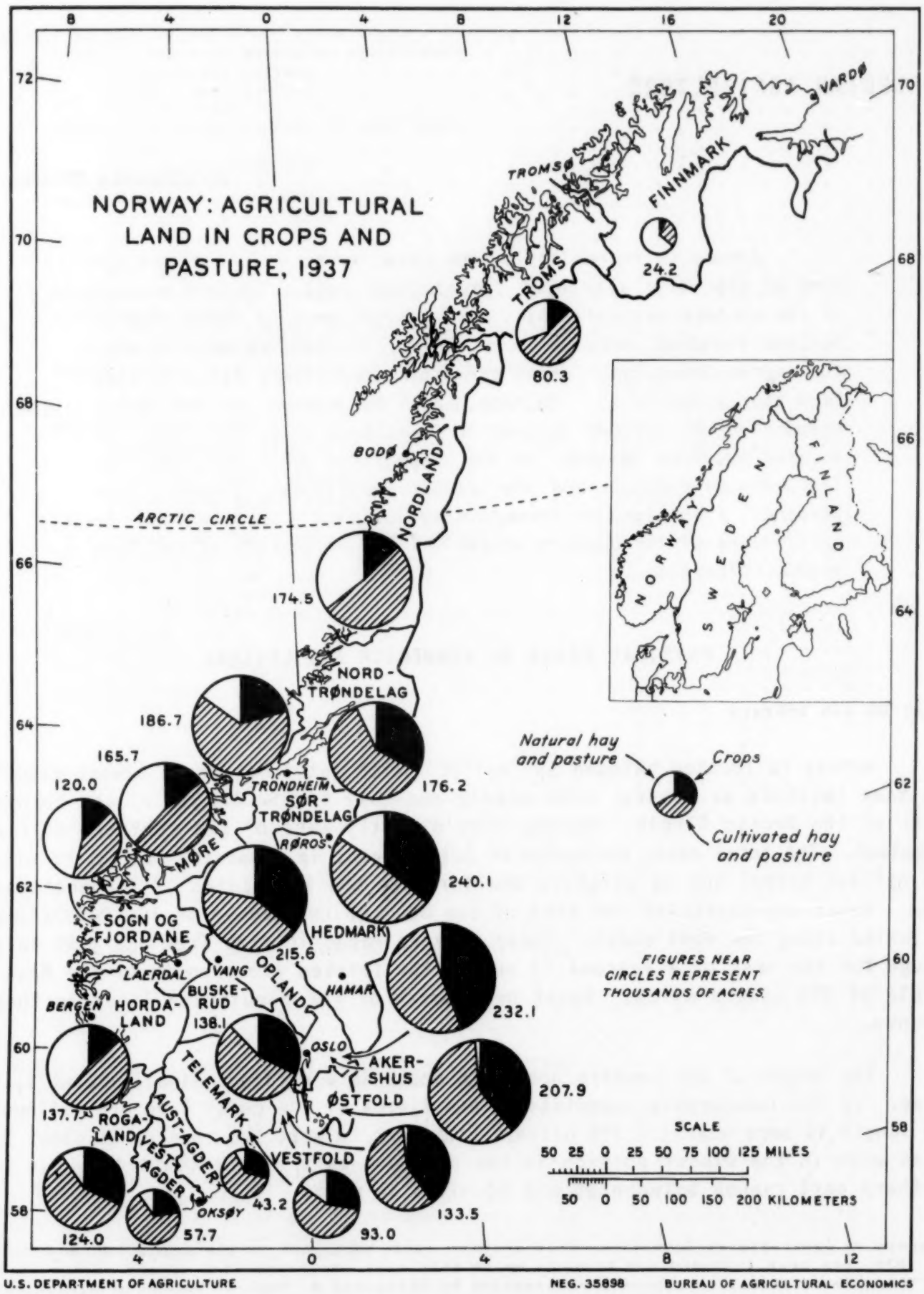
NORWAY: AGRICULTURAL LAND IN CROPS AND PASTURE, 1937
8 4 0 4 8 12 16 20
72 70 68 66 64 62 60 58
VARDØ
TROMSØ
FINNMARK
24.2
TROMS
80.3
BODØ
NORDLAND
ARCTIC CIRCLE
174.5
NORD-TRØNDELAG
186.7
165.7
120.0
TRONDHEIM
SØR-TRØNDELAG
176.2
RØROS
MØRE
240.1
SOGN OG FJORDANE
HEDMARK
215.6
LAERDAL
VANG
OPLAND
HAMAR
BERGEN
HORDA-LAND
BUSKE-RUD
138.1
232.1
OSLO
AKER-SHUS
207.9
TELEMARK
ØSTFOLD
137.7
ROGA-LAND
AUST-AGDER
VEST-AGDER
VESTFOLD
OKSØY
43.2
133.5
124.0
57.7
93.0
NORWAY
SWEDEN
FINLAND
Natural hay and pasture
Crops
Cultivated hay and pasture
FIGURES NEAR CIRCLES REPRESENT THOUSANDS OF ACRES
SCALE
50 25 0 25 50 75 100 125 MILES
50 0 50 100 150 200 KILOMETERS
4 0 4 8 12
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Figure 1.

The uniqueness of Norwegian agriculture is caused by the geographic location and ruggedness of the country; and, if viewed only from the standpoint of arable land, agriculture might not at first seem important. Norway is a mountainous country, whose coast line stands out in bold relief, with cliffs rising sheer from the sea in most places about 1,500 feet. Peaks in the Kjølen Range are between 5,000 and 6,000 feet high, with a few more than 6,000 feet. The slopes are steep, and all the land is rugged, as may be seen from the following tabulation.

Description	*Percent*
Bare mountains of rock	60
Forests of pine, spruce, and birch	21
Grazing land high on mountain plateaus	8
Lakes	4
Ice fields	4
Agricultural land (see map page 66)	3

CLIMATE AND RAINFALL

No other country in the world with a similar latitude has such a temperate climate. This is due to the moderating effect of the Gulf Stream Drift, without which much of Norway would be uninhabitable.

TABLE 1.—*Temperature in Norway, by months, average 1861-1920 and year 1937*

[*Fahrenheit*]

YEAR AND MONTH	WEST-COAST AREA AT-						EAST SIDE AREA AT-			
	BERGEN	LAERDAL	TROND-HEIM	BODØ	TROMSØ	VARDØ	RØROS	VANG	OSLO	OKSØY
1861-1920	*Degrees*	*Degrees*	*Degrees*	*Degrees*	*Degrees*	*Degrees*	*Degrees*	*Degrees*	*Degrees*	*Degrees*
January	34.5	29.5	27.3	28.4	26.2	22.1	12.6	18.1	22.3	32.9
February	34.2	30.0	27.9	27.0	24.8	21.4	14.0	19.0	23.4	32.4
March	35.6	33.6	30.6	28.2	25.9	23.5	18.7	26.1	28.4	33.6
April	41.5	42.3	38.3	35.1	31.5	29.5	29.1	37.8	38.7	39.9
May	48.2	50.5	45.9	42.1	37.2	35.1	39.0	47.5	49.6	48.2
June	54.5	58.1	53.6	49.8	45.5	42.4	48.6	57.0	58.5	56.1
July	57.4	61.0	57.2	54.3	51.3	47.7	52.2	59.7	62.2	60.1
August	56.7	58.3	55.4	53.1	49.8	47.8	49.6	56.3	59.4	59.0
September	52.2	50.5	48.9	46.6	43.9	43.2	42.4	48.7	51.3	54.1
October	45.5	42.3	40.5	39.0	36.0	34.9	32.4	38.3	41.0	46.8
November	39.4	35.2	33.1	32.7	30.0	28.2	21.9	28.0	30.7	39.9
December	35.6	30.6	27.7	28.4	26.6	24.1	14.4	19.9	24.4	35.1
Average	44.6	43.5	40.5	38.7	35.7	33.3	31.2	38.0	40.8	44.8
1937										
January	37.8	32.4	29.1	32.7	29.7	27.7	16.5	22.8	[1] 26.2	34.2
February	34.0	24.6	23.5	23.9	22.6	22.6	8.8	17.6	[1] 22.5	29.5
March	34.0	30.7	28.8	27.9	25.0	24.8	17.1	24.8	27.3	29.3
April	46.9	48.2	44.8	44.4	38.7	35.1	35.1	40.5	42.8	40.1
May	52.5	55.0	51.8	47.7	43.2	39.6	46.9	51.6	53.4	50.2
June	53.8	55.8	54.9	51.8	49.8	47.7	50.4	54.9	56.3	54.9
July	60.3	64.9	63.0	62.8	59.5	50.9	60.3	63.7	65.5	62.2
August	61.9	64.2	61.5	58.6	55.0	54.9	57.0	63.1	65.3	65.1
September	52.7	50.0	50.0	49.1	45.7	45.9	44.1	50.2	52.7	56.1
October	50.5	47.8	45.9	44.6	40.6	39.7	40.5	44.2	46.8	51.8
November	39.4	33.1	32.7	36.0	32.0	30.9	22.8	27.7	31.8	40.5
December	33.3	26.1	24.3	27.1	25.7	25.0	9.5	17.4	21.9	29.3
Average	46.4	44.4	42.5	42.2	39.0	37.1	34.1	39.9	42.7	45.3

[1] Estimates.

Compiled from *Statistisk Årbok.*

Equable temperatures prevail. The January temperature along Norway's west coast does not vary greatly from 32° F., and the July temperature in the same area is about 58° F. The January temperature in the eastern area is lower than that of the coast, and the July temperature is higher. February is the coldest month, and July and August are the warmest months. See table 1.

The rainfall is heavy along the west coast of Norway, especially the southern part where the altitude is greatest. There the annual precipitation is often more than 70 inches, while farther north it is between 35 and 40 inches. In the vicinity of Bergen, it rains about 200 days during the year, though the sun may shine during some of those 200 days. Showers and sunshine are often intermittent, and during the summer farm work is carried on between the showers. Over the mountains on the eastern slopes, the annual precipitation is between 25 and 30 inches.

TABLE 2.--*Precipitation in Norway, by months, average 1876-1925 and year 1937*

YEAR AND MONTH	WEST COAST AREA AT-						EAST SIDE AREA AT-			
	BERGEN	LAERDAL	TROND-HEIM	BODØ	TROMSØ	VARDØ	RØROS	VANG[1]	OSLO	OKSØY
Average 1876-1925	*Inches*	*Inches*	*Inches*	*Inches*	*Inches*	*Inches*	*Inches*	*Inches*	*Inches*	*Inches*
January	7.9	2.1	3.5	2.8	3.9	2.7	1.3	1.0	1.5	2.6
February	5.7	1.4	2.7	3.4	3.4	2.6	1.0	.8	1.2	2.2
March	5.4	1.1	2.3	2.4	3.0	2.1	1.0	1.1	1.5	2.6
April	3.7	.5	1.8	1.9	2.1	1.6	.8	1.1	1.5	1.9
May	4.1	.9	1.5	2.7	2.1	1.4	1.2	1.7	1.9	2.0
June	3.5	1.2	1.7	2.6	2.2	1.5	1.9	2.0	2.0	1.6
July	4.9	1.7	2.3	2.7	2.3	1.8	2.6	2.9	3.0	2.7
August	6.9	1.9	3.0	2.0	2.6	2.0	2.7	3.3	4.0	3.9
September	8.0	2.2	3.2	4.3	4.7	2.4	1.8	1.8	2.3	3.0
October	8.2	1.7	3.5	4.6	4.3	2.5	1.5	2.1	2.8	4.0
November	7.4	1.8	3.1	4.0	4.3	2.5	1.1	1.2	2.0	3.6
December	7.7	1.7	2.6	2.2	3.0	2.6	1.0	1.5	1.9	3.9
Average	73.4	18.2	31.2	35.6	37.9	25.7	17.9	20.5	25.6	34.0
1937										
January	4.5	2.3	.6	2.9	2.9	1.0	.5	.9	1.8	4.8
February	3.1	.2	.2	1.1	2.6	2.8	.5	.7	1.5	5.2
March	1.1	.3	.8	.9	1.3	2.1	.6	1.4	1.6	1.5
April	1.6	.3	1.6	1.2	.8	.5	.6	2.5	2.2	2.9
May	3.8	1.7	1.7	3.1	4.2	.7	1.1	2.8	2.9	1.8
June	10.1	1.9	2.2	3.7	3.6	2.2	3.2	2.9	3.1	3.0
July	3.0	1.2	1.4	.9	.9	.6	3.2	1.7	1.4	.6
August	2.2	.4	.8	2.6	1.9	1.2	.6	1.2	1.3	.6
September	14.7	2.8	3.9	4.9	4.1	2.3	2.7	3.8	4.8	3.7
October	5.8	1.8	3.2	8.4	5.7	1.8	.7	1.2	1.3	.9
November	3.1	.6	3.4	6.9	5.7	2.3	1.1	.5	.5	1.5
December	3.2	.4	.8	2.5	3.1	.9	1.3	1.8	3.0	2.2
Total	56.2	13.9	20.6	39.1	36.8	18.4	16.1	21.4	25.4	28.7

[1] Average 1876-1925 at Hamar. Station moved from Hamar to Vang April 30, 1934.

[2] Estimates.

Compiled from *Statistisk Årbok.*

FARMING AREAS

The farming areas in this rugged, far-northern country are widely scattered and made up of small irregular tracts. The best and most fertile areas are found along rivers, lakes, and fjords. A Norwegian farm is located wherever a sufficient amount of soil has collected to produce vegetation. The bit of land may be a

relatively level projection on a precipice, a small clearing between boulders, a spot on a sidehill requiring steps for access, or one of the many islands off the coast. The exception to these small and irregular tracts is the farming area in the eastern part of the country extending north of Oslo in an expanse of about 450 square miles (288,000 acres) of relatively level land.

In general, agricultural land in Norway is thought of as of two distinct types - that of the West Side and that of the East Side - where methods of farming and farm living have been adapted to the differing geographic features of the country.

The West Side - or west-coast farming area - is characterized by smaller and usually more irregular farms; a more prevalent combination of farming and fishing; fewer grain crops; smaller farm equipment; and usually smaller, though comfortable, farm homes. Much of the farm work, particularly in the southern part, is done by hand, especially haying on small places and on mountainsides. Farther north in the area of Trondheim, horse-drawn mowing machines and rakes are used. Every spear of hay is saved from the small hay-producing areas. The abundant rainfall has necessitated the stringing of wires on temporary stays in the field or on the mountainside where hay is harvested, and the hanging of hay on these wires to cure.

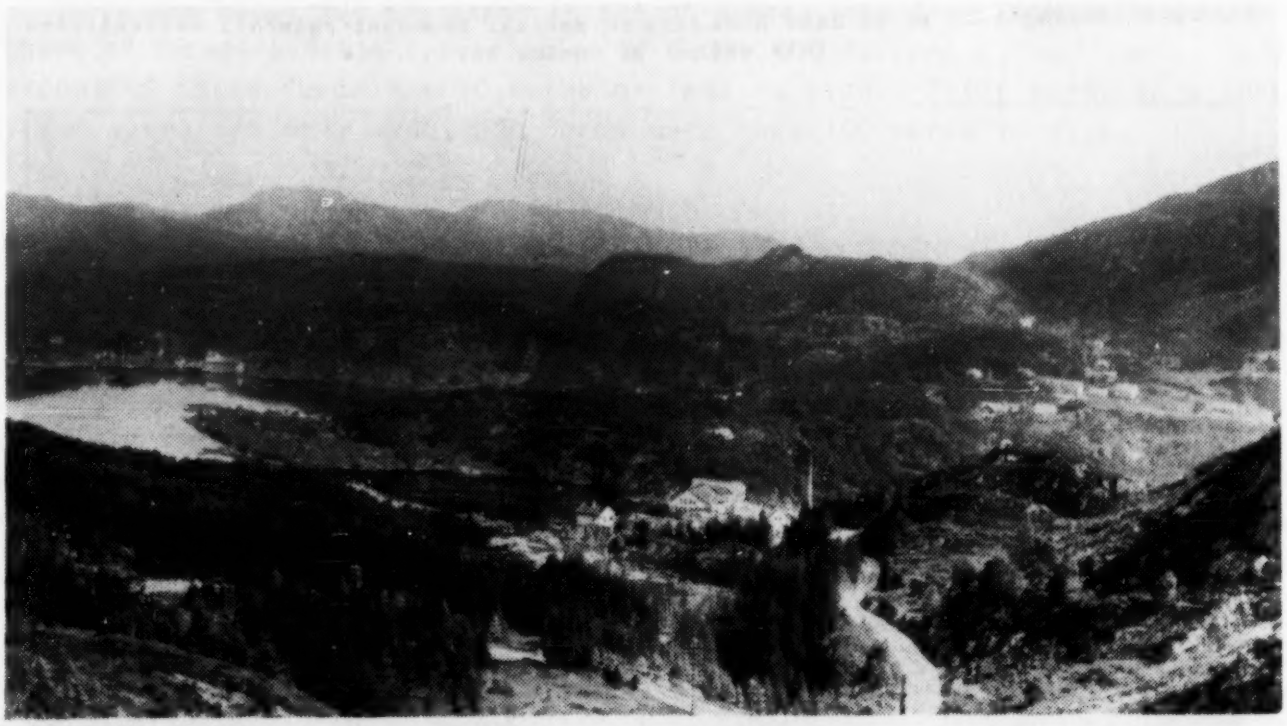

Figure 2.-Typical farm land near Bergen on the West Side of Norway. In the foreground is an experiment station. Note the crushed-rock road and the electricity-distribution lines, illustrative of those found throughout the country.

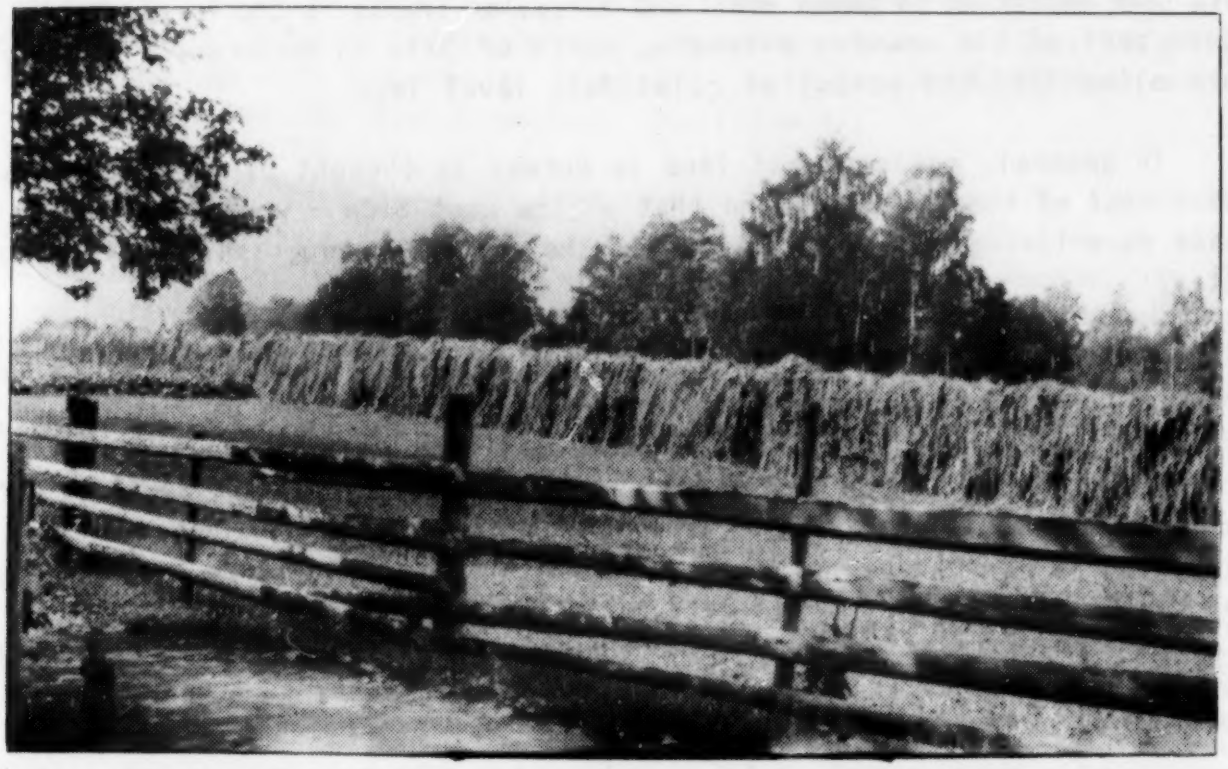

Figure 3.-Haying time on an East Side farm in Norway. Abundant rainfall necessitates this method of curing hay.

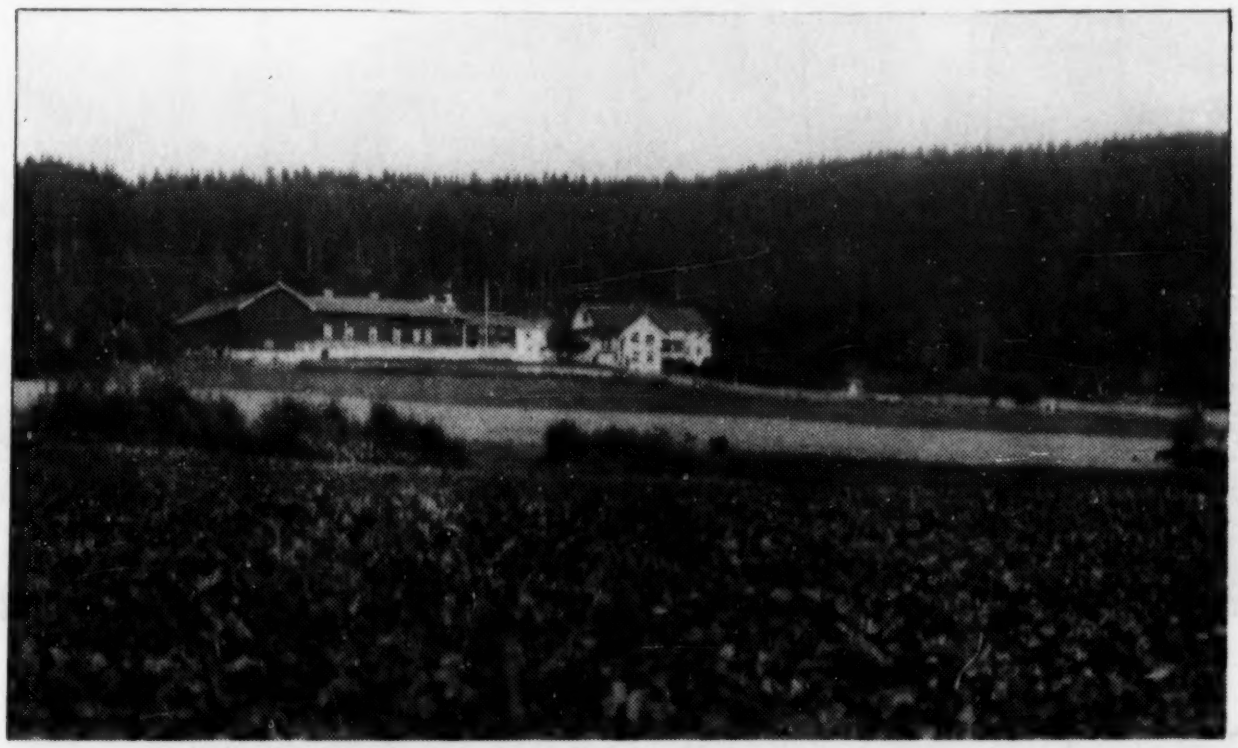

Figure 4.-Modern 50-acre farm on the East Side of Norway. The buildings and the methods used on this farm are up-to-date in every respect.

Many of these West-Side farms are island farms, and boats are needed as a mode of travel and communication with the mainland. Also, this area has numerous indentations of the sea, making boat travel far inland possible. Many boats used by the farmers are rowboats, but some are propelled by motor.

The East Side - or interior farming area - is characterized by larger farms with more grain crops; greater production of fruits and truck crops; a prevalent combination of farming and forestry; the use of more and larger farm equipment, including a few tractors; and larger and more comfortable homes. The usual mode of travel is by horse-drawn vehicle.

In all parts of this area the soil is thin and contains a high percentage of sand and clay. A great deal of artificial fertilization is necessary, but Norway produces large quantities of fertilizers, synthetic nitrate and fish meal predominating. Labor through the years has cleared these tracts of forests, boulders, and rocks, though on many farms rocks are still a formidable obstacle. The growing season of about 4 months is enhanced by the fact that the northern two-thirds of Norway is in the "land of the midnight sun" and experiences a summer of continual daylight. In the southern part of the country the day is long, and to the southernmost point twilight lasts all night during the summer.

There are about 300,000 farms in all of Norway, and from these approximately one-third of Norway's present population of 2,907,000 derives a livelihood. About 80 percent of these farms are 10 acres or less in size. Fifty acres is a large farm, and there are only about 300 farms more than 100 acres in size.

ADAPTATION OF AGRICULTURE TO ENVIRONMENT

CROPS

The scarcity of agricultural land calls for highly intensive agricultural methods. Intensive methods, together with an abundance of moisture and a temperate climate, result in high yields of all field crops and the production of practically all truck crops and many fruits. In the northernmost Districts, especially Finnmark and Troms, production is limited to the hardier crops, such as potatoes, barley, turnips, kohl-rabi, and in some years small quantities of wheat, rye, and oats. Vegetables, such as cabbage, carrots, celery, and beets, are also grown. Potatoes always mature in these northern Districts, and in favorable seasons barley ripens to the northernmost point of the country.

By far the greater part of Norwegian farming, however, is done in the Districts south of the Arctic Circle, especially in the relatively level area north of Oslo on Norway's East Side.

Expansion in the area devoted to grains began during the World War to provide sustenance, as far as possible, for the population. More laborers were employed on farms; farming was more intensive; and production increased in spite of the limited agricultural land in the country. In the years since the World War

TABLE 3.—*Acreage, production, and yield per acre of grains and potatoes in Norway, 1909, 1917-1938, and 1937 by Districts*[1]

YEAR AND DISTRICT	WHEAT			RYE			BARLEY			OATS			POTATOES		
	ACREAGE	PRODUCTION	YIELD PER ACRE	ACREAGE	PRODUCTION	YIELD PER ACRE	ACREAGE	PRODUCTION	YIELD PER ACRE	ACREAGE	PRODUCTION	YIELD PER ACRE	ACREAGE	PRODUCTION	YIELD PER ACRE
	1,000 acres[2]	*1,000 bushels*	*Bushels*	*1,000 acres*[2]	*1,000 bushels*	*Bushels*	*1,000 acres*[2]	*1,000 bushels*	*Bushels*	*1,000 acres*[2]	*1,000 bushels*	*Bushels*	*1,000 acres*[2]	*1,000 bushels*	*Bushels*
1909[3]	12	313	-	37	1,011	-	89	2,596	-	264	8,804	-	102	22,084	-
1917[3]	21	501	23	27	573	22	117	4,302	37	254	13,342	52	113	31,090	275
1918[3]	41	1,085	27	36	1,046	29	156	5,873	38	342	18,907	55	130	28,656	220
1919[3]	-	350	-	-	910	-	-	5,053	-	-	16,044	-	-	36,426	-
1920[3]	-	597	-	-	807	-	-	4,704	-	-	14,751	-	-	29,587	-
1921[3]	-	585	-	-	884	-	-	3,645	-	-	12,304	-	-	25,767	-
1922[3]	-	641	-	-	864	-	-	4,437	-	-	13,708	-	-	32,969	-
1923[3]	25	571	23	27	791	29	124	3,395	27	255	9,164	36	114	26,490	232
1924[3]	21	485	23	25	655	26	136	4,645	34	230	10,640	46	117	23,034	197
1925	22	490	22	22	614	28	139	5,180	37	241	12,048	50	117	34,500	296
1926	22	586	27	23	647	28	143	5,125	36	241	13,332	55	119	32,870	276
1927	25	605	25	23	606	26	150	4,672	31	240	12,665	53	123	22,232	180
1928	28	798	28	18	497	27	149	5,134	35	246	12,680	52	125	34,933	280
1929	30	750	25	18	538	29	132	4,533	34	239	12,146	51	114	33,070	289
1930	30	720	24	19	556	29	134	4,922	37	239	13,621	57	117	28,144	241
1931	29	592	21	15	378	25	138	4,207	30	237	9,494	40	116	28,451	244
1932	28	749	27	16	522	32	137	5,433	40	235	13,328	57	123	38,030	309
1933	28	755	27	16	438	28	142	4,597	32	242	12,416	51	120	35,890	299
1934	46	1,204	26	15	395	27	147	5,307	36	226	12,145	54	120	29,415	245
1935	59	1,869	32	15	483	31	153	5,667	37	215	12,532	58	123	33,674	275
1936	75	2,094	28	15	425	29	149	5,273	35	210	11,797	56	127	34,754	273
1937	79	2,497	32	15	443	30	149	5,933	40	211	12,984	62	128	31,620	247
1938	86	2,637	31	13	432	32	148	5,711	39	211	13,554	64	132	34,452	260
1937	*Acres*	*1,000 bushels*	*Bushels*	*Acres*	*1,000 bushels*	*Bushels*	*Acres*	*1,000 bushels*	*Bushels*	*Acres*	*1,000 bushels*	*Bushels*	*Acres*	*1,000 bushels*	*Bushels*
Finnmark	-	-	-	-	-	-	8	-	-	-	-	-	562	78	140
Troms	1	(4)	37	2	(4)	20	3,234	82	37	22	1	53	4,146	808	195
Nordland	54	2	27	235	8	32	6,102	216	35	1,855	99	53	8,137	1,807	222
Nord-Trøndelag	1,435	51	35	32	1	38	24,174	1,005	42	15,134	933	62	9,048	2,570	284
Sør-Trøndelag	381	13	33	31	1	30	20,103	849	42	7,989	492	62	5,586	1,518	272
Møre og Romsdal	155	5	34	33	1	36	5,581	238	43	9,382	578	62	6,291	1,410	224
Sogn og Fjordane	72	2	33	22	1	36	2,553	114	44	4,035	219	54	5,180	996	192
Hordaland	94	3	29	19	1	33	695	29	42	4,498	268	60	7,955	1,279	161
Rogaland	3,331	133	40	203	8	38	3,843	179	47	13,303	977	73	9,188	2,132	232
Vest-Agder	921	30	33	213	7	32	433	17	39	5,833	357	61	3,470	710	205
Aust-Agder	2,013	60	30	304	9	31	1,042	38	36	3,573	212	59	3,546	749	211
Telemark	6,621	186	28	581	18	32	2,915	105	36	5,992	343	57	5,036	1,189	236
Vestfold	13,223	378	29	2,674	80	30	2,395	84	35	17,508	1,057	60	8,454	1,998	236
Buskerud	7,759	231	30	1,039	31	30	8,013	299	37	12,418	712	57	6,003	1,307	218
Opland	4,605	151	33	1,517	52	34	33,884	1,348	40	9,525	598	63	9,863	3,301	335
Hedmark	8,357	289	35	1,874	65	35	15,049	630	42	29,663	1,862	63	14,325	4,857	339
Akershus	11,845	362	31	1,734	51	29	18,272	643	35	36,910	2,262	61	11,475	3,721	237
Østfold	18,291	601	33	4,122	109	27	1,602	57	36	33,462	2,014	60	10,005	2,190	219
Total	79,158	2,497	32	14,635	443	30	148 898	5,933	40	211.102	12,984	62	128.270	31,620	247

[1] Acreages 1919-1922 are not available.

[2] Census data for 1907.

[3] Production data for 1917-1924 were revised in 1937.

[4] Less than 500

Compiled from *Statistisk Årbok* and *Jordbruksstatistikk*.

TABLE 4.—*Acreage, production, and yield per acre of feed crops in Norway, 1917-1938 and 1937 by Districts*[1]

YEAR AND DISTRICT	MIXED GRAINS			PEAS			TURNIPS AND KOHL-RABI					GREEN FORAGE			HAY			STRAW
	ACREAGE	PRODUCTION	YIELD PER ACRE	ACREAGE	PRODUCTION	YIELD PER ACRE	ACREAGE[2]	PRODUCTION			YIELD PER ACRE	ACREAGE	PRODUCTION	YIELD PER ACRE	ACREAGE	PRODUCTION	YIELD PER ACRE	PRODUCTION
								TURNIPS	KOHL-RABI	TOTAL								
	1,000 acres	1,000 short tons	Short tons	1,000 acres	1,000 short tons	Short tons	1,000 acres	1,000 short tons	1,000 short tons	1,000 short tons	Short tons	1,000 acres	1,000 short tons	Short tons	1,000 acres	1,000 short tons	Short tons	1,000 short tons
1917[3]	21	18	0.9	5	4	0.7	18	-	-	298	16.2	16	-	-	1,678	2,166	1.3	581
1918[3]	29	27	.9	9	7	.7	24	-	-	367	15.3	14	-	-	-	2,134	-	866
1919[3]	-	22	-	-	5	-	-	-	-	414	-	-	-	-	-	2,219	-	737
1920[3]	-	18	-	-	3	-	-	-	-	392	-	-	-	-	-	2,542	-	670
1921[3]	-	16	-	-	3	-	-	-	-	426	-	-	-	-	-	2,480	-	532
1922[3]	-	18	-	-	3	-	-	-	-	442	-	-	-	-	-	2,483	-	625
1923[3]	20	13	.6	4	2	.5	28	-	-	465	16.6	31	-	-	-	2,214	-	486
1924[3]	20	16	.8	3	2	.6	30	-	-	428	14.2	33	-	-	-	2,620	-	538
1925	19	17	.9	3	2	.8	32	503	84	587	18.4	28	-	-	-	2,677	-	551
1926	18	17	.9	3	2	.8	33	490	91	581	17.7	27	-	-	-	2,563	-	569
1927	17	14	.8	3	2	.7	34	443	85	528	15.3	28	-	-	-	2,740	-	577
1928	17	14	.9	3	2	.7	36	518	94	612	16.9	27	-	-	-	2,294	-	631
1929	14	12	.9	3	2	.7	42	638	149	786	18.6	36	-	-	1,644	2,588	1.6	556
1930	14	13	.9	3	2	.8	44	594	162	756	17.1	26	-	-	1,641	2,955	1.8	594
1931	14	9	.7	3	2	.6	44	532	157	689	15.5	38	-	-	1,649	2,800	1.7	512
1932	14	13	.9	3	2	.8	46	698	192	890	19.3	37	-	-	1,651	2,704	1.6	586
1933	14	12	.9	3	2	.7	45	594	179	773	17.0	38	-	-	1,653	2,246	1.4	507
1934	12	10	.8	2	2	.7	47	606	190	796	17.0	39	-	-	1,654	2,858	1.7	576
1935	11	11	1.0	2	2	.9	47	576	203	779	16.7	38	78	2.1	1,655	2,889	1.7	617
1936	11	10	.9	2	2	.8	46	565	226	791	17.2	36	78	2.2	1,658	2,537	1.5	605
1937	11	11	1.0	2	2	.9	46	558	236	794	17.4	36	74	2.1	1,665	3,198	1.9	667
1938	11	12	1.1	2	2	.9	45	552	256	808	18.1	35	79	2.2	1,668	3,307	2.0	675
1937	Acres	Short tons	Short tons	Acres	Short tons	Short tons	Acres	1,000 short tons	1,000 short tons	1,000 short tons	Short tons	Acres	1,000 short tons	Short tons	1,000 acres	1,000 short tons	Short tons	1,000 short tons
Finnmark	-	-	-	-	-	-	8	(4)	(4)	(4)	9.5	1,059	1	1.2	22	20	0.9	-
Troms	1	1	1.0	-	-	-	100	1	(4)	1	13.6	3,434	7	2.0	69	111	1.6	3
Nordland	37	31	.8	3	2	0.7	624	8	1	9	14,7	3,990	9	2.1	149	222	1.5	12
Nord Trøndelag	91	87	1.0	36	34	.9	5,358	86	7	93	17.3	1,214	3	2.1	105	177	1.7	57
Sør Trøndelag	171	159	.9	13	9	.7	2,790	44	3	47	16.6	1,029	2	2.2	137	247	1.8	41
Møre og Romsdal	65	64	1.0	3	2	.7	1,169	19	1	20	17.1	1,301	2	1.7	131	228	1.7	25
Sogn og Fjordane	67	63	.9	3	2	.7	735	10	2	12	15.9	993	2	2.2	101	186	1.8	10
Hordaland	118	115	1.0	2	2	1.0	698	5	4	9	12.8	1,588	4	2.2	114	224	2.0	9
Rogaland	68	68	1.0	18	14	.8	4,885	22	54	76	15.7	1,512	4	2.4	70	185	2.6	37
Vest Agder	10	9	.9	8	8	1.0	513	3	5	8	15.8	543	1	2.0	43	90	2.1	13
Aust Agder	69	63	.9	54	47	.9	538	4	5	9	16.3	363	1	2.1	30	63	2.1	11
Telemark	47	41	.9	22	19	.9	1,419	12	7	19	13.4	1,210	2	1.9	61	116	1.9	24
Vestfold	349	317	.9	54	46	.9	3,309	24	26	50	15.2	1,362	3	2.0	73	155	2.1	50
Buskerud	920	791	.9	319	264	.8	2,083	26	10	36	17.4	2,205	4	2.0	86	176	2.0	42
Opland	6,101	6,015	1.0	872	785	.9	4,897	81	19	100	20.4	4,598	10	2.0	118	225	1.9	83
Hedmark	1,308	1,275	1.0	484	437	.9	5,826	106	24	130	22.4	5,117	11	2.2	135	259	1.9	81
Akershus	1,054	965	.9	314	257	.8	6,437	61	49	110	17.0	2,493	5	2.0	114	261	2.3	91
Østfold	603	556	.9	178	144	.8	4,330	46	19	65	14.9	1,677	3	2.0	107	253	2.4	78
Total	11,079	10,620	1.0	2,383	2,072	.9	45,719	558	236	794	17.4	35,688	74	2.1	1,665	3,198	1.9	667

[1] Acreages 1919-1922 are not available

[2] Acreage of turnips and kohl-rabi reported together.

[3] Production data 1917-1924 were revised in 1937

[4] Less than 500 short tons.

Compiled from *Statistisk Årbok* and *Jordbruksstatistikk*.

there has been a shift in acreage from rye and oats to wheat, partly because a taste has been acquired for white breads and most likely in some degree because a hardier wheat has been developed, more suitable to the geographic location of the country. With the exception of rye and oats, the production of grain crops and potatoes has not declined to the pre-war production levels. Rye production in recent years has been about half of what it was in pre-war years.

Figure 5. - A productive and comfortable farm across the Norwegian border from Petsamo, Finland, in Finnmark, nearly 200 miles north of the Arctic Circle. Note method of curing hay, shown at right.

None of Norway's crops, with the possible exception of hay and potatoes, are sufficient to satisfy domestic consumption, and Norway is therefore on an import basis for agricultural products. In some years a few potatoes are exported, and there have been recent attempts to encourage the exportation of berries. The largest agricultural exports are of cheese, butter, powdered and condensed milk, and eggs. Cowhides, calfskins, sheepskins, and goatskins are also exported.

Seasons differ in Norway, of course, as elsewhere. The greatest climatic drawbacks are occasional late springs and early freezes. Both of these materially affect the maturity and yields of the various crops.

FRUITS AND VEGETABLES

In fruits and vegetables, as well as other agricultural and dairy products, the State aim has been to make the country as self-sustaining as possible. All kinds of vegetables are grown in nearly all parts of the country. Every farm and many city and village dwellers have gardens in which are produced cabbage, carrots, beans, peas, leeks, celery, beets, parsley, rhubarb, cucumbers, tomatoes, and other fresh vegetables. In some years small quantities have actually been exported.

TABLE 5.—*Production of truck crops in Norway, by Districts, 1937, annual 1933-1938*

YEAR AND DISTRICTS	CABBAGE	CARROTS (1)	BEANS (2)	PEAS (2)	LEEKS (3)	CELERY (4)	BEETS (5)
	Short tons	*Bushels*	*Bushels*	*Bushels*	*Bushels*	*Crates*	*Bushels*
1933	39,542	758,462	36,787	17,387	21,076	9,171	13,393
1934	56,978	708,682	40,579	20,216	28,561	10,798	16,534
1935	40,106	604,933	27,638	13,918	22,454	7,292	12,855
1936	53,209	739,851	31,217	17,328	25,072	8,108	16,055
1937	54,130	776,174	28,990	24,971	26,163	8,848	14,813
1938	58,386	704,277	28,520	19,952	27,431	8,733	15,636
1937							
Finnmark	1	220	-	-	-	-	-
Troms	163	5,847	-	-	-	7	30
Nordland	286	10,053	-	-	-	3	38
Nord-Trøndelag	619	29,418	-	103	33	12	136
Sør-Trøndelag	682	14,665	-	132	44	12	106
Møre og Romsdal	803	15,661	7	30	11	12	47
Sogn og Fjordane	293	4,630	-	44	88	10	254
Hordaland	1,285	16,204	73	228	309	169	411
Rogaland	4,907	115,450	-	44	529	191	992
Vest Agder	764	21,927	272	162	292	81	47
Aust-Agder	1,293	12,099	3,483	8,098	667	191	127
Telemark	1,852	25,397	213	176	474	277	170
Vestfold	4,081	46,601	2,418	485	1,516	478	708
Buskerud	4,134	28,594	1,227	573	2,618	370	301
Opland	3,692	39,648	162	1,227	143	177	17
Hedmark	5,872	84,326	353	213	606	301	292
Akershus	16,981	95,239	7,826	1,727	15,873	5,308	7,983
Østfold	6,422	210,195	12,956	11,729	2,960	1,249	3,154
Total	54,130	776,174	28,990	24,971	26,163	8,848	14,813

YEAR AND DISTRICTS	RHUBARB[6]	GROWN IN OPEN		GROWN UNDER GLASS		OTHER VEGETABLES
		CUCUMBERS[7]	TOMATOES[8]	CUCUMBERS[7]	TOMATOES[8]	
	Boxes	*Bushels*	*Bushels*	*Bushels*	*Bushels*	*Short tons*
1933	41,579	11,974	4,609	26,345	58,264	342
1934	49,008	11,909	3,336	34,424	69,894	398
1935	43,271	7,670	3,602	30,231	71,055	319
1936	44,566	9,393	3,723	31,200	71,878	359
1937	45,707	8,116	3,731	32,945	78,675	353
1938	45,707	6,839	3,078	32,665	73,788	348
1937						
Finnmark	-	-	-	-	-	-
Troms	226	-	-	32	75	17
Nordland	166	-	-	28	125	4
Nord-Trøndelag	116	-	-	303	786	3
Sør-Trøndelag	358	-	-	946	1,264	3
Møre og Romsdal	700	-	62	455	927	3
Sogn og Fjordane	61	14	50	14	21	7
Hordaland	4,404	9	104	1,139	3,253	11
Rogaland	15,344	-	-	450	7,920	8
Vest-Agder	2,105	55	108	1,088	1,427	5
Aust-Agder	3,472	303	92	418	1,868	12
Telemark	628	28	75	1,098	1,789	5
Vestfold	1,389	501	304	2,632	10,054	24
Buskerud	1,036	152	466	4,643	6,268	23
Opland	254	9	8	363	1,460	4
Hedmark	402	23	137	2,747	9,476	6
Akershus	12,351	776	1,676	12,111	20,615	95
Østfold	2,695	6,246	649	4,478	11,347	123
Total	45,707	8,116	3,731	32,945	78,675	353

[1] In bushels of 50 pounds.
[2] In bushels of 30 pounds.
[3] In bushels of 40 pounds.
[4] In terms of crates of 90 pounds.
[5] In bushels of 52 pounds.
[6] In boxes of 40 pounds.
[7] In bushels of 48 pounds.
[8] In bushels of 53 pounds.

Compiled from *Statistisk Årbok* and *Jordbruksstatistikk*.

TABLE 6.--*Number of trees and bushes and production of fruit in Norway, by districts, 1937, annual 1929 and 1933-1938*

YEAR AND DISTRICT	APPLES		PEARS		PLUMS		CHERRIES	
	TREES	PRODUCTION[1]	TREES	PRODUCTION[2]	TREES	PRODUCTION[3]	TREES	PRODUCTION
	Thousands	*1,000 bushels*	*Thousands*	*1,000 bushels*	*Thousands*	*1,000 bushels*	*Thousands*	*Short tons*
1929	1,181	-	279	-	534	-	519	-
1933	-	1,479	-	155	-	289	-	5,160
1934	1,354	558	303	105	613	244	540	4,298
1935	1,403	1,375	304	239	631	306	556	6,651
1936	1,442	711	309	93	647	351	561	6,694
1937	1,494	1,105	311	162	655	250	563	4,356
1938	-	515	-	132	-	299	-	5,083
1937								
Finnmark	-	-	-	-	-	-	-	-
Troms	(5)	-	(5)	-	-	-	(5)	-
Nordland	(5)	-	(5)	-	(5)	-	(5)	-
Nord-Trøndelag	10	4	(5)	-	1	-	15	77
Sør-Trøndelag	4	2	(5)	-	(5)	-	7	35
Møre og Romsdal	41	27	8	4	7	3	12	131
Sogn og Fjordane	133	147	48	39	24	10	12	138
Hordaland	107	94	65	57	68	19	70	278
Rogaland	31	22	23	15	74	30	26	232
Vest-Agder	50	26	11	2	41	11	35	327
Aust-Agder	53	29	14	6	35	12	29	225
Telemark	144	93	18	4	51	10	42	233
Vestfold	138	107	39	12	77	32	81	750
Buskerud	150	121	18	6	94	44	56	555
Opland	75	58	1	1	5	3	34	269
Hedmark	102	84	1	(5)	5	2	32	168
Akershus	294	202	33	3	104	59	69	551
Østfold	162	89	32	13	69	15	43	387
Total	1,494	1,105	311	162	655	250	563	4,356

	RED CURRANTS		BLACK CURRANTS		GOOSEBERRIES		STRAWBERRIES	RASPBERRIES
	BUSHES	PRODUCTION[4]	BUSHES	PRODUCTION[4]	BUSHES	PRODUCTION[4]	PRODUCTION[6]	PRODUCTION[6]
	Thousands	*Crates*	*Thousands*	*Crates*	*Thousands*	*Crates*	*Crates*	*Crates*
1929	1,992	-	1,394	-	1,283	-	-	-
1933	-	404,774	-	73,335	-	130,003	79,353	96,519
1934	2,077	395,248	1,367	88,790	1,319	140,915	146,453	91,577
1935	2,089	446,464	1,374	117,919	1,326	160,463	145,914	124,150
1936	2,091	418,435	1,359	113,587	1,324	151,383	143,195	133,801
1937	2,104	426,746	1,340	110,666	1,353	156,664	183,778	153,287
1938	-	406,345	-	106,808	-	153,385	149,950	131,210
1937								
Finnmark	(5)	-	(5)	-	(5)	-	-	-
Troms	4	289	(5)	-	(5)	-	98	-
Nordland	50	4,395	11	207	9	344	73	141
Nord-Trøndelag	70	15,409	67	3,674	56	2,048	870	790
Sør-Trøndelag	84	14,633	43	1,947	47	4,276	3,907	214
Møre og Romsdal	106	19,465	84	7,716	104	15,106	2,113	1,004
Sogn og Fjordane	71	15,882	66	5,452	67	7,638	655	2,186
Hordaland	164	30,217	178	10,614	141	12,778	4,697	3,552
Rogaland	139	31,893	194	17,834	81	10,049	3,074	1,764
Vest-Agder	95	16,778	45	3,509	57	7,500	3,938	1,353
Aust-Agder	71	13,246	83	6,894	35	3,514	16,008	3,772
Telemark	135	25,059	45	3,688	65	7,491	5,040	3,895
Vestfold	141	29,156	60	5,470	74	7,684	16,730	11,629
Buskerud	138	31,609	62	5,668	89	10,270	41,006	17,147
Opland	145	36,638	62	5,388	71	7,321	4,189	6,749
Hedmark	157	31,751	59	4,037	73	8,382	11,911	8,408
Akershus	344	71,043	162	14,876	273	37,556	59,818	79,807
Østfold	190	39,283	119	13,692	111	14,707	9,651	10,876
Total	2,104	426,746	1,340	110,666	1,353	156,664	183,778	153,287

[1] In bushels of 48 pounds.

[2] In bushels of 50 pounds.

[3] In bushels of 56 pounds.

[4] In crates (32 quarts) of 40 pounds.

[5] Less than 500.

[6] In crates (24 quarts) of 36 pounds.

Compiled from *Statistisk Årbok* and *Jordbruksstatistikk*.

Apples, pears, plums, cherries, currants, gooseberries, strawberries, and raspberries are the principal fruits. Although a few bushels of apples and pears have been exported in recent years, imports of fruits far exceed exports. All citrus fruits are imported, about 300,000 boxes coming from the United States. The United States also supplies most of the canned fruits that are imported. The fact that so many fruits and vegetables can be grown in Norway demonstrates Norway's moderate climate.

LIVESTOCK[1]

The domestic livestock of Norway consists of horses, cattle, hogs, goats, rabbits, reindeer, and chickens. There are also more than 21,000 hives of bees in the country.

There are two breeds of horses in Norway suited to the two distinct agricultural regions, the Eastland horse and the Westland, or Fjord, horse. The Eastland horse, which originated in Guldbransdal, has been mixed with the Westland horse, the Danish breed, and English thoroughbreds. Systematic efforts by the State have been made over the past century to improve this horse, resulting in a hardy, energetic, and stocky animal admirably suited to the types of machinery used on the farms in this rugged country and to vehicles used on the narrow crushed-rock roads. It may be considered a light, all-purpose draught horse, weighing between 1,000 and 1,200 pounds.

Figure 6.-An East Side farmer goes to market. He has delivered his farm produce and is returning with his purchases.

The Westland horse is in reality a firm, hard pony. The farms are small in the west-coast area, and the ground difficult to travel because of boulders, abrupt slopes, and forests. Also, small horses are easily transported to island farms. This small, strong, horse, which requires little feed, is especially well suited to the types of farming and the general work in the west-coast area. Over a period of years it has also been improved by the State.

[1] Most of the material concerning types of livestock was obtained from *Norwegian Agriculture*, by O. T. Bjanes [in English], Oslo, 1932. This reference contains a comprehensive summary of several phases of Norwegian agriculture.

The cattle are mostly milk cows. The great geographic differences in this country have resulted in several breeds of cattle, adapted to widely differing areas. In the fjord areas and the mountainous section of the country they are small and hardy, whereas on the more level agricultural land on the eastern side of the country and in the area around Trondheim, where feed is more plentiful and the land comparatively level, they are larger. In all areas the milk cows have a high capacity for milk production in relation to their size. The national cattle-breeding movement has been influential in producing a type of cattle able to withstand the rigors of the land and climate.

TABLE 7.—*Livestock in Norway, 1938*[1] *with comparisons*

YEAR	HORSES		CATTLE		HOGS	SHEEP	GOATS	CHICKENS
	TOTAL	OVER 3 YEARS	TOTAL	MILK COWS				
	Thousands	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*
1910	168	–	1 134	–	334	1,398	288	–
1917	202	157	1,150	765	238	1,295	239	1,884
1918	211	–	1,046	–	207	1,400	235	1,676
1923	193	170	1 131	776	237	1,525	242	2,638
1924	186	165	1,114	765	249	1,507	259	3,018
1925	184	163	1 151	773	253	1,529	276	3,173
1926	183	162	1 200	783	303	1,595	290	3,053
1927	183	162	1 209	791	300	1,608	290	2,994
1928	182	161	1,221	799	283	1,654	293	3,092
1929	177	157	1,224	755	289	1 533	324	2,929
1930	177	157	1 251	763	339	1,588	333	3,098
1931	177	156	1 310	777	317	1 692	344	3 324
1932	179	15	1 342	796	304	1 736	343	3,503
1933	180	156	1 340	810	420	1 764	343	3 544
1934	181	155	1 294	793	550	1 698	338	3 513
1935	183	155	1,328	796	410	1,737	334	3,437
1936	185	156	1 348	804	410	1,749	331	3,472
1937	190	156	1 343	808	445	1,739	322	3,481
1938	193	158	1 399	832	429	1 778	308	3,526

[1] Data for 1919-1922 are not available.

Compiled from *Statistisk Årbok*, and *Jordbruksstatistikk*.

TABLE 8.—*Livestock in Norway, by Districts, 1937*

DISTRICT	HORSES		CATTLE		HOGS	SHEEP	GOATS	CHICKENS	RABBITS[1]	REINDEER[1]	HIVES OF BEES[1]
	TOTAL	OVER 3 YEARS	TOTAL	MILK COWS							
	Thousands	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Thousands*	*Number*	*Number*
Finnmark	1	1	15	9	–	37	8	6	1	78,371	1
Troms	6	5	51	30	–	87	16	31	2	3,471	–
Nordland	9	8	103	58	–	185	23	114	7	7,632	6
Nord Trøndelag	11	9	76	42	–	65	16	167	8	8,614	5
Sør Trøndelag	13	11	87	51	–	102	20	139	11	2,985	19
Møre og Romsdal	12	9	86	55	–	156	26	142	20	425	21
Sogn og Fjordane	11	7	78	47	–	216	95	61	8	2,770	7
Hordaland	10	8	85	55	–	267	30	193	7	788	149
Rogaland	15	12	92	57	48	334	17	787	5	–	411
Vest Agder	4	4	42	27	–	44	2	103	3	–	770
Aust Agder	3	3	27	17	–	24	1	73	5	–	1,850
Telemark	8	7	50	31	22	28	7	146	6	–	2 329
Vestfold	10	9	57	32	25	4	(2)	271	8	–	2.504
Buskerud	11	9	69	42	15	31	9	158	21	3,060	1 692
Opland	17	13	128	78	46	75	39	167	15	2,672	1 320
Hedmark	18	15	119	70	42	71	13	210	16	244	1,610
Akershus	16	14	92	57	55	10	(2)	312	23	–	4 297
Østfold	15	12	86	50	38	3	(2)	401	21	–	4 322
Total	190	156	1,343	808	[3] 291	1,739	322	3.481	187	111.032	21.313

[1] Census of June 20, 1929. The 1929 census of total rabbits as revised in 1937 is 200,179

[2] Less than 500.

[3] Enumerated in 8 Districts only.

Compiled from *Statistisk Årbok*.

TABLE 9.—*Production of meats, dairy products, and wool in Norway, 1917 and 1927-1937*[1]

YEAR AND DISTRICT	MEATS					
	HORSE	BEEF	MUTTON	GOAT	PORK	TOTAL
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*
1917	4,453	70,547	19,841	2,425	52,910	150,176
1927	4,032	84,745	29,789	3,294	68,131	189,991
1929	3,622	84,643	28,003	3,635	71,669	191,572
1931	3,613	90,554	30,895	3,876	78,759	207,697
1933	3,638	93,321	32,203	3,860	78,726	211,748
1934	3,668	91,092	31,590	3,829	99,297	229,476
1935	3,693	93,453	32,319	3,792	83,775	217,032
1936	3,765	94,672	32,355	3,759	85,364	219,915
1937	-	-	-	-	90,389	224,195
1936						
Finnmark	13	690	556	88	18	1,365
Troms	55	2,875	1,790	245	324	5,289
Nordland	126	5,889	3,942	262	939	11,158
Nord-Trøndelag	275	6,129	1,332	203	3,380	11,319
Sør-Trøndelag	298	6,757	1,896	221	3,203	12,375
Møre og Romsdal	194	5,262	2,943	304	2,581	11,284
Sogn og Fjordane	423	4,724	3,730	1,116	2,723	12,716
Hordaland	214	5,110	4,449	304	3,298	13,375
Rogaland	372	6,177	5,820	220	10,999	23,588
Vest-Agder	18	2,917	919	18	957	4,829
Aust-Agder	40	1,817	445	15	1,938	4,255
Telemark	112	3,754	598	86	4,510	9,060
Vestfold	212	4,932	77	-	7,573	12,794
Buskerud	159	4,892	642	108	3,485	9,286
Opland	403	8,355	1,543	428	8,867	19,596
Hedmark	267	8,561	1,400	141	9,325	19,694
Akershus	302	8,117	205	-	13,058	21,682
Østfold	282	7,714	68	-	8,186	16,250
Total	3,765	94,672	32,355	3,759	85,364	219,915

	MILK		BUTTER	CHEESE	EGGS	WOOL
	COW	GOAT				
	1,000 pounds	*1,000 pounds*	*1,000 pounds*	*1,000 pounds*	*1,000 dozens*	*1,000 pounds*
1917	2,506,718	52,196	6,768[2]	15,430[2]	13,580	4,367
1927	2,622,367	63,184	7,156	33,380	24,875	5,421
1929	2,695,295	68,706	8,307	33,750	24,005	5,172
1931	2,773,554	74,743	13,272	36,614	27,612	5,708
1933	2,892,435	74,855	19,352	36,535	31,968	5,950
1934	2,869,265	73,232	20,366	38,380	31,689	5,734
1935	2,980,619	72,421	20,470	41,332	31,011	5,864
1936	3,007,608	71,841	25,086	46,921	31,321	5,908
1937	3,025,972	69,707	26,715	47,275	31,407	5,866
1936						
Finnmark	23,788	3,073	291	2,187	56	110
Troms	84,654	6,784			297	280
Nordland	171,048	8,463	443	1,197	997	736
Nord-Trøndelag	168,191	3,435	631	4,416	1,436	223
Sør-Trøndelag	182,162	3,960	1,054	1,266	1,265	346
Møre og Romsdal	146,476	2,928	886	2,524	1,292	547
Sogn og Fjordane	128,737	14,268	670	549	554	706
Hordaland	169,906	5,181	756	1,305	1,806	849
Rogaland	228,732	3,025	3,448	6,768	6,925	1,069
Vest-Agder	98,669	251	635	820	1,036	152
Aust-Agder	62,963	302	441	489	658	90
Telemark	127,909	1,878	1,027	979	1,311	112
Vestfold	147,547	13	1,233	1,385	2,502	15
Buskerud	177,605	2,394	1,080	1,678	1,434	99
Opland	289,881	11,107	2,189	11,601	1,534	256
Hedmark	292,888	4,740	3,675	4,852	1,892	265
Akershus	270,573	24	3,761	2,445	2,779	38
Østfold	235,879	15	2,866	2,460	3,547	15
Total	3,007,608	71,841	25,086	46,921	31,321	5,908

[1] Data 1927-1937 are for years beginning June 20, except butter and cheese, which are for calendar year indicated. Data other than for butter and cheese are not available for 1928, 1930, and 1932.

[2] Data for 1915.

Compiled from *Statistisk Årbok* and *Jordbruksstatistikk*.

The sheep of the country are mostly of English and Scotch breeds, with the Cheviot type especially prevalent. From the original sheep of the country and the imported kinds, a type has been developed that is larger, and yet well suited to conditions in the country. In sections of the country where dairying can be carried on successfully, sheep have been replaced by dairy cattle to a large extent.

The goat has always been a leading domesticated animal in rough mountainous areas where other animals find foraging exceedingly difficult. In Norway goats are kept chiefly for milk, from which an export cheese is made.

Swine production in recent years has increased constantly in Norway, until at present there are twice as many as there were 20 years ago. Formerly the Yorkshire predominated, but recently an attempt was made to breed a type more fitted to the country - the so-called Landswine.

Probably three-fourths of the poultry in the country are White Leghorns. About 10 years ago, the State started breeding stations, of which there are now 20 situated in different parts of the country. The purpose of these stations has been to increase the egg production per hen, and during the existence of these stations the average egg yield has been increased from 150 eggs to 200 eggs per year.

The reindeer in the northern Districts are the mainstay of the Laplander population. Many families are nomadic, moving from place to place to find grazing areas for the reindeer, which furnish them means of transportation, their meat supply, a large part of their clothing, and covering for their tents. Some of the inhabitants of the northern Districts, whose herds are not large enough to justify a nomadic life, live in one place in rather comfortable farm homes and raise the limited crops grown in these Districts. Reindeer are kept in all but the southernmost regions, but by far the largest numbers are in the Districts of the far north.

Rabbits are also farm animals in Norway, there being over 200,000 in 1937 scattered throughout the entire length of the country, though most numerous in the southern Districts. Rabbits are kept for food and for their skins. Honey, produced by the 21,000 hives of bees, is a substantial item of food. As a point of interest, it might be noted that there is one hive in Finnmark, far above the Arctic Circle.

AGRICULTURE AS A WAY OF LIFE

THE FARM - A TRADITION

A Norwegian farm is a family tradition. The oldest son becomes owner at the death of his father. In reality he has the first right to purchase the farm from the other heirs for a nominal sum. Often the oldest son takes over the management of the farm long before he inherits it. Practically all Norwegian farms have at least two dwellings on them, one for the retired farmer and one for the son who will inherit the place. See figure 7. Norwegian farmers who retire seldom move to town; rather they continue to live on the farm, where all their interests are.

Taxes on the assessed valuation of farm properties have increased only slightly in recent years. The average for the State as assessed in 1936 was equivalent to about 3.8 mills on the dollar. Income taxes, however, were about 15 cents on the dollar for incomes above legal exemptions. All incomes of less than 2,000 kroner (approximately $500) are exempt.

Through the law of primogeniture, a farm tends to stay in one family for generations. Sons and their male descendants are the first to inherit; the daughters of the sons and the descendants of these daughters are the second to inherit; and the daughters of the original holders and their descendants are the third to inherit. Succession is always traced from the latest possessor of the property.

Between 90 and 95 percent of the farms in Norway are individually owned. Occasionally, a portion of a farm is sold. When this is done, the new divisions must be capable of supporting a family unit. When several persons are in the market for a single piece of land, the one who has done most to improve it or is the closest blood relative of either the owner or the one who has rented it has prior right of purchase. Norwegian farming is a way of life, not a commercial undertaking, and farms are seldom sold unless there is no heir or the owner is a failure as a farmer. Few Norwegian farmers are failures; so the farms sold are few in number.

OLD FARM CULTURE

The relative inaccessibility of Norway, one of the oldest sovereign States in Europe, long prevented ready contact with the outside world. Communication between farms in neighboring valleys was infrequent because of the difficult terrain. The farm home became the significant social unit in Norway, and within it developed the distinctive Norwegian culture.

Many farmhouses of hundreds of years ago still stand, and some have been taken over by the State to preserve this old Norwegian culture. These early farm homes were constructed of the materials available locally. The foundations are of Norway's abundant rock, uncut. The houses are of hand-hewn lumber from the forests, and the years have given them a brownish color, verging on golden, that only the elements could paint. They are usually furnished with hand-made furniture in the style of the day in which they were constructed. The spacious rooms have square open fireplaces, long wooden tables with long benches on either side, hand-carved cupboards, and seemingly short wooden beds. These old homes bespeak comfort and cleanliness, but elegance is entirely lacking.

In many instances the old farm homes have become a fad with city people in Norway and have been purchased and moved into cities and towns, where they have been modernized and where they diffuse an air of old Norway in a new setting. Farm culture representative of old Norway is preserved for posterity and the world in museums - notably in the museum at Oslo and Maihaugen Museum at Lillehammer. Thus the old farm culture of Norway is preserved both in museums and in the lives of the people.

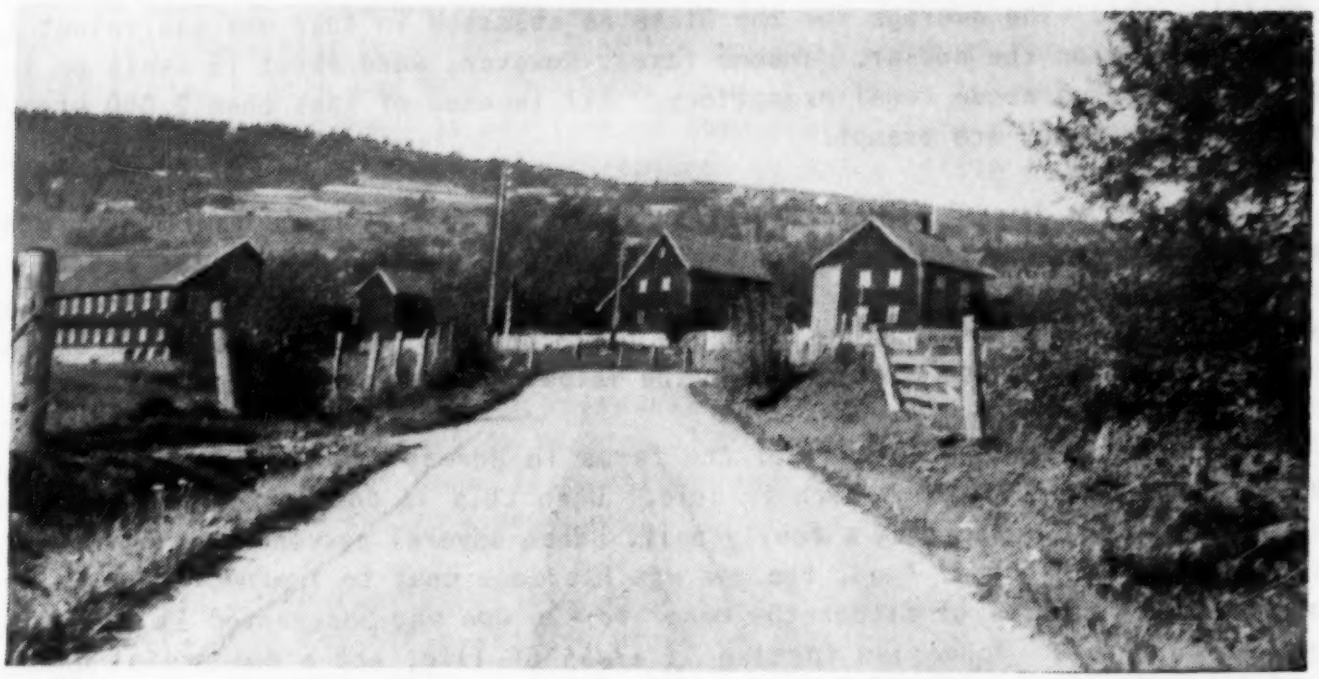

Figure 7.- Old-type farmhouses and barn on the East Side of Norway. The second house from the right has been taken over by the State to preserve old farm culture, as to both architecture and household furnishings.

FARM LIFE

Norwegian farm homes are comfortable. Some of the larger ones have the appearance of summer hotels. The smaller ones, often of two or three rooms only, are nevertheless sturdily built to withstand the cold. Cleanliness prevails, and the furnishings are much the same as in the farmhouses of the United States, except where furnishings of earlier centuries have been preserved.

Practically every farm, no matter what its size, is kept in a neat condition. No debris lies around the buildings; nothing seems to be done in a haphazard fashion; the yards seem fine-tooth combed. Most of the buildings are painted - a splash of color in the summer green or in the winter snow.

During the summer 4 months of continual daylight, which the northern two-thirds of Norway experiences, farmers are seen out any hour of the night. It is not uncommon to see a coast farmer in his small boat going to visit a neighbor to have coffee at half past 3 in the morning. Even though farms are adjacent, the land between may be so rocky and difficult to travel that by boat is the easier way. The people seem to sleep when sleep overtakes them. During the rest of the time they absorb the sunshine while they can.

They do not, however, idle throughout the long winter night of approximately 4 months. They necessarily stay indoors more, but they are seldom unoccupied. Practically every home has a loom, and the people weave not only for home use but for sale. Many farms have contracts with stores to furnish a specified amount of woven material. In some cases, the store furnishes the materials with which to work and pays the farm people for the work only. In other cases, the farm people

furnish both materials and labor. They weave tablecloths, luncheon sets, towels, pillow tops, scarfs, and many other articles. They often prepare their own flax, wool, or cotton, and also their own delicate vegetable dyes. Besides the weaving, much hand sewing and embroidery is done. This type of work is carried on in conjunction with farming to spread employment and furnish cash to farm people in both the East Side farming area and the West Side.

Although only 6 percent of the entire population devotes all its time to the fishing industry, this furnishes year-round employment and a cash income to many coast farmers. Even where it is not part-time employment, fishing furnishes the meat supply for the family table. The housewife need only request meat for the noonday meal, and husband or son rows away in his boat. He soon returns with a goodly catch.

In more recent years, especially since about 1925, silver-fox farming has furnished additional cash incomes to Norwegian farmers. The production of fur animals is carried on in connection with many small farms throughout the country. These fur animals consume tons of meat and fish each year, and in this way have helped to maintain meat prices.

In the southern and eastern part of the country, forestry in either privately owned or State-owned forests furnishes year-round employment and a cash income in connection with farming. About 80 percent of the farms have forest land attached to them, which furnishes wood for fuel and timber for sale. Only about 20 percent of the country's forests is State owned.

Odd jobs about the farm are numerous. Men keep their fishing apparatus in repair, keep their farm tools in order, and care for the livestock during the long winter when the entire country is snow-covered. They also make twig brooms, used on many of the city streets. They have the necessary materials from the forests and find it profitable to make these brooms in their spare time, selling them for 8 or 10 cents. There seems to be no rush of work on Norwegian farms; and, generally speaking, there is no idleness, but rather a busy life of comparative ease and seeming contentment. In practically every farm home the coffee pot is on for visitors and the coffee cream is heavy. Too, some member of the family always makes delicious pastries, and the table is often spread with a beautiful piece of embroidery done by the mother or daughter.

Living standards are high, probably among the highest in the world, and prices of living essentials compare very favorably with those in the United States. Though the farm homes are isolated, most farms now have telephones and radios. Radios keep them in touch with the world and educational programs predominate. Electrical appliances of all descriptions are found in farm homes, since about two-thirds of the farms have access to, and are financially able to use, electric current.

Norwegian farm life seems to be the best possible adjustment to the natural environment and the Norwegian farm is a place of comfort and health, affording for farm families time for recreation and enjoyment of life.

FARM LABOR

Farming in Norway in the old days was a stern and severe task. First there was the selection of the most promising tracts. Even upon these, much hard labor had to be performed - labor by might of hand and physical endurance. Forests had to be cleared by manpower; boulders had to be removed by manpower. Each year, over long periods of time, rocks, which seemed to grow out of the thin soil, had to be removed from many areas. These early conditions necessitated the development of some type of farm labor. In these earlier times farming was the main pursuit by which a living could be obtained, and agricultural land was scarce. Probably the most enterprising or the first upon the scene acquired the virgin farm land.

Thus back in the ages developed the *husmannsplass*. In order to obtain help to make the land productive, the owner offered a small house and a little plot of ground to the *husmann* (cotter) and his family, the *husmannfolk*, in return for a specified amount of work on the owner's farm each year. The *husmann's* contract with the owner was usually a life contract, though this differed somewhat in different sections of the country. Year in and year out the *husmann* and his family worked at arduous, backbreaking tasks, for a wage never more than a few cents a day. On the other hand, they were always sure of a place to stay. As late as 1885, the average daily wage of the *husmann* was 14 cents. From that year on there was a gradual increase until in 1915 the average daily wage was about 46 cents.

Figure 8.- A *husmannsplass*, located on a fresh-water lake in eastern Norway. Note the fishing tackle at the left and the flowers in the yard.

The number engaged in this type of farm labor declined from 67,396 in 1855 to 19,811 in 1910 and to 6,079 by 1929; today it is practically nonexistent. Indeed, it is rather difficult to find examples of this type of Norwegian farm people. Much legislation has indirectly opposed this farm labor under contract, and most farmowners have voluntarily released their *husmannfolk* from work under the old terms. In recent years there has been much gradual social reform in Norway.[2] Old social customs, however, have not been uprooted summarily. A few old members

[2] Nordskog, John Eric, *Social Reform in Norway*, Los Angeles, 1935.

of this distinctly Norwegian class of agricultural people still live on the *husmannsplass*, not for the labor they perform but because it is home to them for the rest of their lives.

Farm labor, other than family labor, is now hired by the month. Wages approximate a dollar a day with board during the harvesting season, and about 75 cents during the winter season. Women doing farm work receive about one-half the wages men receive. A 10-hour day prevails for summer work and an 8-hour day during the winter. The work days are broken by long rest periods and four or five meals are served.

Figure 9.-Ingeborg, a former *husmann's* daughter, born to hard work in the fields. At the age of 87 she still enjoyed a good day's work and retained a keen sense of humor and interest in world affairs.

Horses do all the heavy work on the small farms, and it might be added that a team indicates rather large-scale farming. The land on only a few farms in Norway permits the use of a tractor for field work, and most of the farm machinery is of the smaller type.

On fully two-thirds of Norway's farms electricity furnishes not only light and power for household appliances but also power for turning wood-sawing engines, cream separators, and other machinery.

Norway has the largest per-capita hydroelectric power, both developed and potential, of any country in the world. Per-capita consumption for domestic uses is about 3,000 kilowatt hours as compared with about 100 kilowatt hours in Europe as a whole and with approximately 150 kilowatt hours in the United States. Different rates apply to current used for different purposes. A common device used to measure the consumption of current is the current-limiter, which automatically limits the use to a fixed maximum. For those not in an economic position to purchase appliances for the efficient use of a maximum, kilowatt tariffs have been introduced so that subscribers may use the energy they require and pay for the amount actually consumed. The current-limiter is the less expensive if appliances are sufficient for an economic use, with rates from about three quarters of a cent to 2 cents per kilowatt hour.

Women do the work in the fields, but not with the feeling that it is toil. Few old women are seen working outdoors any more, and the young girls seem to make

sport of their work. They always have time to wave to a passer-by and seldom seem to work in the field all day, for if one passes the same farm in the afternoon, they will be seen sitting outside at home busied with handicraft work. The exercise in the open fields seems most health-giving.

TABLE 10.—*Daily Wages of agricultural laborers in Norway, 1915-16 to 1937-38*

SEASON AND TERMS	MEN					WOMEN				
	SUMMER HALF YEAR				WINTER HALF YEAR	SUMMER HALF YEAR				WINTER HALF YEAR
	SPRING WORK	HAY HARVEST	GRAIN HARVEST	OTHER WORK		SPRING WORK	HAY HARVEST	GRAIN HARVEST	OTHER WORK	
With board:	*Kroner*	*Kroner*	*Kroner*	*Kroner*	*Kroner*	*Kroner*	*Kroner*	*Kroner*	*Kroner*	*Kroner*
1915-16	2.51	2.95	2.49	2.37	1.81	1.30	1.53	1.42	1.18	1.02
1920-21	8.71	9.88	8.83	8.11	6.84	4.60	5.13	4.93	4.14	3.50
1925-26	5.03	5.75	4.97	4.64	3.81	3.05	3.45	3.25	2.81	2.41
1930-31	3.22	3.70	3.20	2.94	2.47	2.04	2.28	2.17	1.84	1.63
1931-32	2.97	3.38	2.94	2.70	2.30	1.92	2.13	2.03	1.74	1.53
1932-33	2.79	3.18	2.77	2.55	2.13	1.80	2.00	1.89	1.65	1.46
1933-34	2.68	3.05	2.68	2.43	2.04	1.74	1.93	1.81	1.60	1.40
1934-35	2.70	3.07	2.69	2.48	2.10	1.74	1.95	1.85	1.61	1.42
1935-36	2.81	3.17	2.83	2.61	2.23	1.81	2.01	1.93	1.68	1.48
1936-37	3.00	3.38	3.03	2.78	2.41	1.94	2.12	2.03	1.79	1.60
	) 3.54	4.04	3.65	3.34	2.92	2.21	2.46	2.38	2.11	1.89
1937-38[1]	)*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*
	) 0.88	1.00	0.91	0.83	0.72	0.55	0.61	0.59	0.52	0.47
Without board:	*Kroner*	*Kroner*	*Kroner*	*Kroner*	*Kroner*	*Kroner*	*Kroner*	*Kroner*	*Kroner*	*Kroner*
1915-16	3.64	4.00	3.64	3.32	3.08	2.12	2.35	2.22	2.00	1.84
1920-21	12.50	13.64	12.71	11.95	10.25	7.09	7.67	7.44	6.76	5.81
1925-26	7.60	8.18	7.56	7.15	6.18	4.85	5.19	4.98	4.58	4.06
1930-31	4.72	5.14	4.71	4.43	3.90	3.15	3.37	3.29	2.96	2.72
1931-32	4.34	4.72	4.35	4.07	3.57	2.93	3.15	3.02	2.77	2.50
1932-33	4.03	4.40	4.04	3.78	3.32	2.75	2.94	2.85	2.60	2.36
1933-34	3.93	4.26	3.90	3.66	3.21	2.66	2.85	2.74	2.52	2.27
1934-35	3.92	4.27	3.95	3.70	3.28	2.68	2.89	2.79	2.56	2.32
1935-36	4.06	4.38	4.08	3.84	3.40	2.75	2.96	2.87	2.63	2.38
1936-37	4.29	4.63	4.31	4.07	3.64	2.92	3.13	3.05	2.81	2.55
	) 4.97	5.41	5.08	4.78	4.33	3.27	3.50	3.45	3.18	2.93
1937-38[1]	)*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*
	) 1.24	1.34	1.26	1.19	1.08	0.81	0.87	0.86	0.79	0.73

[1] Conversions at 1937 average rate of exchange (24.84 cents to the krone).
Compiled from *Statistisk Årbok.*

TABLE 11.—*Agricultural machinery in Norway, by Districts*[1]

DISTRICT	REAPERS	MOWERS	BINDERS	PLANTERS	POTATO DIGGERS	GASOLINE TRACTORS	ENGINES OTHERS	ELECTRIC MOTORS	WAGONS	CARTS
	Number	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*	*Number*
Finnmark	19	128	-	-	4	-	1	3	47	762
Troms	53	1,688	2	9	12	2	17	31	250	6,743
Nordland	249	3,426	10	107	173	11	96	106	924	11,109
Nord Trøndelag	3,303	3,600	519	1,653	1,588	66	537	1,713	2,492	14,508
Sør Trøndelag	2,231	5,532	244	1,112	843	61	528	823	1,380	17,590
Møre og Romsdal	462	6,386	20	498	310	21	299	546	293	21,018
Sogn og Fjordane	110	3,978	3	241	183	-	58	252	742	9,842
Hordaland	153	4,854	7	286	98	6	61	424	586	12,858
Rogaland	1,047	5,303	274	1,358	769	39	220	1,929	649	19,749
Vest Agder	444	2,682	8	134	39	6	113	672	2,086	5,983
Aust Agder	366	2,038	16	329	152	6	185	363	3,055	2,550
Telemark	1,100	3,031	158	1,129	779	16	360	733	3,699	6,193
Vestfold	3,293	2,019	536	2,372	1,280	60	176	1,510	6,908	8,047
Buskerud	2,473	2,768	650	2,267	1,025	89	403	1,296	6,104	7,401
Opland	4,118	3,034	1,033	4,262	1,657	40	330	1,586	3,760	12,336
Hedmark	3,300	4,687	889	3,712	1,715	138	319	1,943	6,653	14,265
Akershus	3,737	2,817	1,429	3,935	1,796	204	369	1,698	9,110	10,519
Østfold	4,396	2,076	991	3,608	1,592	124	308	1,647	8,559	11,995
Total	30,854	60,047	6,789	27,012	14,015	889	4,380	17,275	57,297	193,468

[1] Census of June 20, 1929.
Compiled from *Statistisk Årbok.*

GOVERNMENT INFLUENCE IN AGRICULTURE

NEW FARM LAND

Because of the scarcity of agricultural land and the law of inheritance, emigration of the agricultural population became one of Norway's problems. Each year for the past century, large numbers, among them some of the best citizens, left Norway for greater opportunities in lands agriculturally more affluent - principally the United States.

The 3 percent of Norway's surface that is cultivable can be increased to about 4 or 4½ percent, but the expense involved in preparing new land in most cases is almost prohibitive, ranging from about $140 to as much as $1,000 per acre because of the necessity of removing stumps and boulders, and in some cases of draining the land.

In order to stem the tide of emigration and during and after the World War to help the country become more nearly self-sustaining agriculturally, the Government has given direct subsidies and loans at low rates of interest, or without interest, to new homesteaders. About 25,000 acres have been added to the cultivable land every year during the past decade. During the period 1918-1937, about 350,000 acres of new land were brought under cultivation and about 13,000 new farms were established.

AGRICULTURAL SCHOOLS AND EXPERIMENT STATIONS

The Norwegian College of Agriculture, established at Aas about 21 miles south of Oslo in 1859, is a school of higher education that trains principally agricultural teachers, and officials for the Department of Agriculture since the establishment of that Department in 1900.

Besides the Aas College of Agriculture, there are more than 50 schools in all parts of the country specializing in agriculture and doing experimental and demonstration work. Since the country is far reaching from north to south and the contour of the land unusually rough, agricultural conditions in the different sections are so diverse that each school deals with conditions in its particular location. It is obviously not to the best interest of agriculture in such a country to centralize agricultural activities for all locations in one central office. Decentralization has been the keynote of administration.

Practically all sons who will inherit farms, and also many sons who will not, go to the agricultural school most suited to the area in which their home farms are located to learn the best methods to pursue in making the acreage produce most abundantly and to determine the best use to which each part of the land can be put. The farm population as a whole is well educated and vitally interested in social and political changes and in world affairs. Norway has had compulsory education for nearly 100 years.

Under the Department of Agriculture are a number of experiment stations dealing with soil culture, plant production, horticulture, dairying, and the raising of horses, hogs, sheep, and goats. Many other phases of agriculture are also being studied, each in the particular environment in which problems relating to them have arisen. The experiment stations, as well as the agricultural schools, are widely scattered over the whole country to deal with the widely diversified conditions.

Another type of experiment farm under the national organization of the Norwegian Silver Fox Breeders Association operates for the improvement and development of colors in furs. In 1937, the value of fur exports totaled 10 million dollars.

Legislation in Norway relative to natural resources has always been with the idea foremost of preserving these natural resources for the citizens of the country and of improving and developing them in a way most advantageous to the people.

MARKETING METHODS[3]

As late as 1929 there was no effective standardization of quality for agricultural products, and the production of the various commodities that had been expanded during the World War was irregular from year to year. Although the worldwide depression after 1929 was less severe in Norway than in many other countries because of the great variety of both industrial and agricultural production, the decline in prices of agricultural products was felt keenly. The Government at this time began a widespread study of the needs of agriculture, and by 1938 the national budget for agriculture, excluding agricultural schools, was equivalent to approximately 8 million dollars.

Lower prices for agricultural products after 1929 were in part due to expanded production during and immediately following the World War. It was not until after the war that agricultural products were exported to any extent.

The Marketing Act of 1930, supplemented by the act of July 10, 1936, made possible the producers' organizations and marketing organizations affecting the sales of agricultural products in all parts of the country. The Marketing Act provided for a Marketing Board composed of eight members representing eight large agricultural organizations, whose main purpose was to promote cooperation in the marketing of bacon, mutton, milk, cheese, butter, and eggs - the more important export products.

The Government, with the approval of the Marketing Board, has placed a sales tax on products covered by the act as follows: 0.25 cent per gallon of milk; 37 cents per hog slaughtered; and 12 cents per sheep slaughtered (conversions at current rate of exchange). All animals must pass the public meat inspection. The taxes are used by the Marketing Board to improve the distribution of the products covered by the act and to standardize the quality.

[1] Fjelstad, Anders, "Modern Organization and Marketing Methods in Norwegian Agriculture," *Norway: Norwegian Trade Review*, Vol. 10, No. 4, April 1939. [Special number.]

TABLE 12.—*Prices of specified farm products in Norway, by months, 1937-1938*[1]

MONTH	HAY PER SHORT TON		POTATOES PER BUSHEL		BEEF PER POUND		PORK PER POUND		GREEN HIDES PER POUND		EGGS PER DOZEN	
	1937	1938	1937	1938	1937	1938	1937	1938	1937	1938	1937	1938
	Dollars	*Dollars*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Jan	19.71	16.39	49.1	68.7	15.3	19.7	15.0	15.5	9.7	8.4	22.0	27.5
Feb	21.35	16.26	52.9	70.3	15.2	19.4	14.5	14.9	9.8	8.1	21.2	26.4
Mar	23.22	15.72	54.5	71.8	15.3	19.4	13.7	14.4	10.0	7.8	25.4	23.9
Apr	24.02	15.33	54.9	75.3	15.8	19.5	13.3	14.5	11.1	7.3	22.2	22.1
May	22.49	16.57	53.6	83.7	16.7	19.4	13.5	14.8	11.4	7.5	19.1	21.2
June ...	21.28	17.13	55.3	103.0	18.3	19.1	14.1	15.8	10.6	7.2	18.9	22.7
July ...	20.17	14.96	79.1	119.5	21.5	19.2	15.4	16.4	10.5	7.4	22.4	26.1
Aug	18.60	14.19	65.8	67.9	21.8	19.1	15.8	17.2	11.2	8.2	24.4	27.2
Sept ...	17.25	13.77	61.5	52.4	21.6	17.8	15.9	16.6	11.4	8.1	28.6	30.7
Oct	15.70	13.43	61.6	50.1	21.3	17.6	15.8	16.4	10.6	8.0	33.4	33.6
Nov	15.60	13.67	63.5	51.8	21.4	17.3	15.9	16.0	9.3	8.0	35.0	32.8
Dec	15.96	14.01	65.8	51.1	20.5	16.9	15.8	16.2	8.0	7.7	33.5	30.3
Average	19.61	15.12	59.8	72.1	18.7	18.7	14.9	15.7	10.3	7.8	25.5	27.0

MONTH	BUTTER PER POUND		CHEESE PER POUND							
			HELFEIT GAUDAOST		HALVFEIT NØKKELOST		BLANDET GEITMYSOST		MYSOST	
	1937	1938	1937	1938	1937	1938	1937	1938	1937	1938
	Cents	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Jan	28.6	33.7	14.9	18.8	11.7	15.7	13.5	17.0	4.3	5.9
Feb	29.2	33.7	15.3	18.6	12.4	15.8	14.4	17.2	4.3	5.9
Mar	29.7	33.3	15.9	18.7	12.7	15.6	15.1	17.0	4.6	5.9
Apr	30.6	33.5	16.7	18.7	13.7	15.4	16.0	17.0	5.0	5.9
May	30.7	33.6	16.9	18.7	13.5	15.5	16.3	17.0	5.3	5.9
June ...	31.2	33.9	17.2	18.6	13.8	15.4	16.3	17.3	5.4	5.9
July ...	31.7	34.2	17.7	18.5	14.4	15.4	16.4	17.3	5.5	6.0
Aug	31.9	34.0	17.9	18.2	14.8	15.0	16.5	17.2	5.7	6.0
Sept ...	31.7	33.5	18.4	18.1	15.5	14.8	16.5	17.3	5.9	5.9
Oct	31.8	33.4	18.7	17.8	15.9	14.7	16.9	17.3	5.9	6.0
Nov	32.7	33.0	18.8	17.6	15.7	14.4	17.1	17.5	5.9	6.1
Dec	33.5	33.1	18.9	17.6	15.8	14.6	17.1	18.0	5.9	6.6
Average	31.1	33.6	17.3	18.3	14.2	15.2	16.0	17.3	5.3	6.0

[1] Wholesale prices of butter and cheese; producers' prices of other commodities. Conversions to United States currency made at monthly average rate of exchange.

Compiled from *Jordbruksstatistikk.*

About 90 percent of the Norwegian dairy industry, both production and exporting, is cooperative. The remainder is carried on in the upland grazing areas where summer dairies *(saeters)* are established and where the winter's supply of cheese and butter is made for the farm household. In recent years, however, since country

roads have improved and trucks are commonly used, a large part of the milk is collected daily and brought to the cooperative dairies in the valleys.

About 95 percent of the meat producers belong to the Norwegian Meat and Bacon Central, and all cooperative slaughterhouses and meat factories are affiliated with this organization; so this part of agricultural production, too, is on a cooperative basis. Also, cooperative egg-marketing agencies handle a large part of both domestic and export sales. These cooperative undertakings have been especially helpful to the export trade. Fair prices have been obtained; therefore, a more equitable distribution of the national income to agriculture, the country's most important enterprise, has been possible.

Besides the producer-owned cooperatives for dairy products and for abattoirs, an act of 1928 established a Grain Monopoly for the importation of wheat, rye, barley, and oats, and products that consist largely of grains. This monopoly also directs the exportation of these products, and the same restrictions as to quality that apply to imports also apply to grains and grain products of Norwegian origin. The purposes of the Grain Monopoly are to import the quantities of grains and flour needed to meet domestic requirements; to buy all home-grown grain fit for human food offered by growers; and to sell the products in an advantageous manner. The profits of the monopoly are put into a fund for the regulation of prices.[4] [5]

During the present European war emergency, steps have been taken by the Government to conserve the supply of products that must be imported, such as sugar and coffee. Rationing of these products began immediately. Large purchases have been made and stored of necessary raw materials that are not produced in the country, such as cotton and rubber. The Government is also attempting to increase the production of potatoes in the northernmost counties to augment the Nation's food supply. For this purpose grants have been made for the purchase of seed and fertilizers.

FOREIGN TRADE - ITS RELATION TO THE UNITED STATES

Norway is on an import basis for many agricultural commodities. The balance of payments would always be adverse if it were not for the services rendered by the great Norwegian mercantile fleet, whose ships are known in every port of the world.

Formerly a large part of Norwegian imports were manufactured products; but, beginning with the extensive development of the electrical industry at the turn of the century, more of the imports have been raw materials to be partly or wholly manufactured in Norway, using the abundant and cheap electrical supply as power. Machinery and other articles needed for production are also imported to a greater extent that formerly. Total imports of consumers' goods have decreased, whereas imports of producers' goods have increased.

[4] *The Norway Yearbook*, 1938. [In English.]

[5] Bjanes, O. T., *op. cit.*

TABLE 13.—*Norwegian imports and exports of specified grains, potatoes, and apples, 1909-1938*

YEAR	WHEAT[1]		RYE[1]		BARLEY[2]		OATS[3]		POTATOES[4]		APPLES[5]	
	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS
	Bushels	*Bushels*	*Bushels*	*Bushels*	*Bushels*	*Bushels*	*Bushels*	*Bushels*	*Bushels*	*Bushels*	*Bushels*	*Bushels*
1909	3,273,259	752	9,925,868	155,897	5,607,278	29,203	1,143,695	22,031	442,539	11,254	50,823	529
1910	3,284,945	1,008	11,511,769	86,363	5,648,946	28,927	1,419,239	21,534	447,459	10,173	68,457	51
1911	3,689,077	2,600	11,305,028	40,222	5,163,102	14,284	878,678	35,670	419,106	10,248	46,144	3,991
1912	3,088,910	1,598	9,228,167	39,918	3,879,207	8,354	822,413	49,574	51,085	44,494	115,239	258
1913	4,234,079	7,276	11,088,453	46,384	4,004,540	10,720	392,710	30,804	176,277	124,998	60,479	1,282
1914	5,455,387	2,826	8,128,357	33,154	4,011,654	6,781	516,584	18,524	173,580	17,079	82,587	81
1915	6,050,905	467	7,884,954	8,713	1,368,476	4,401	594,027	8,198	63,841	4,104	74,004	42
1916	7,327,290	1,722	7,328,931	6,816	2,465,509	1,920	797,501	9,736	488,729	5,996	84,854	176
1917	5,313,778	149	5,094,809	267	2,264,095	126	713,265	3,015	189	1,577	60,836	(6)
1918	4,260,018	-	3,095,192	-	1,400,593	-	312,044	-	412,297	220	6,436	6
1919	7,386,584	17	6,190,427	4,447	782,067	143	512,568	736,284	245,013	46,096	424,875	163
1920	5,717,982	20,049	8,401,770	9,698	1,211,480	725	60,591	184,205	96,577	567,562	204,140	133
1921	4,214,127	9,558	4,571,170	22,186	2,114,376	3,984	1,058,776	25,044	498,878	21,052	208,733	294
1922	5,620,829	5,794	6,436,673	21,970	2,271,937	4,970	671,559	13,983	398,096	77,034	327,333	96
1923	5,824,560	13,480	7,412,749	42,981	2,524,570	4,226	1,194,707	17,985	8,166	15,297	351,765	58
1924	6,585,666	17,672	8,873,978	78,344	3,217,878	4,785	2,292,707	28,958	1,024	104,080	188,544	8
1925	5,682,303	9,462	7,497,773	50,008	1,522,447	5,866	1,549,019	23,632	157,027	20,010	167,902	412
1926	6,264,279	3,392	7,341,291	33,045	1,971,336	1,023	1,298,726	49,881	1,482	76,468	189,416	480
1927	7,011,879	3,363	7,706,251	23,447	1,351,141	2,855	693,402	57,374	51,592	87,185	249,432	97
1928	7,278,157	6,230	6,257,818	45,992	1,254,598	4,689	273,269	23,725	98,744	14,710	185,781	182
1929	8,024,772	7,657	6,145,013	29,116	1,309,518	4,336	350,509	49,627	2,943	23,767	218,902	35
1930	8,098,717	5,080	6,142,248	18,161	1,989,251	3,931	350,963	21,511	1,493	20,685	169,563	230
1931	8,291,853	20,295	6,311,847	29,573	2,425,375	5,726	401,281	23,311	28,236	228,078	210,039	53
1932	7,879,695	12,194	5,144,944	31,256	896,005	2,526	510,240	26,596	3	479,197	146,798	44
1933	8,746,081	9,179	5,404,777	28,983	597,698	1,693	4,206	15,935	28	57,268	94,342	871
1934	8,390,978	10,504	5,420,612	27,025	431,736	3,389	10,175	37,636	19	44,921	103,893	92
1935	8,917,831	9,237	5,550,502	13,374	583,218	2,397	204,030	14,857	14,692	19,550	111,136	2,234
1936	7,115,744	5,312	4,844,490	10,744	713,988	1,207	17,738	11,867	26	109,957	94,777	490
1937	8,081,532	2,302	5,291,268	7,443	1,276,803	750	415,208	20,506	14	32,348	116,638	644
1938	8,127,577	4,233	5,187,357	9,266	595,487	692	28,505	6,837	94,571	16,232	230,914	90

[1] Includes flour in terms of grain.

[2] Includes flour and malt in terms of grain.

[3] Includes flour and meal in terms of grain.

[4] Includes dried potatoes, 1920-1933.

[5] Includes pears and in some years plums, 1909-1931; apples only, 1932-1938.

[6] Less than one-half bushel.

Compiled from *Norges Handel*.

TABLE 14.—*Norwegian imports and exports of meats, dairy products, wool, and hides and skins, 1909-1938*

YEAR	MEATS[1]		MILK[2]		EGGS[3]		BUTTER		CHEESE		WOOL[4]		HIDES AND SKIN[5]	
	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS	IMPORTS	EXPORTS
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 dozen	1,000 dozen	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds
1909	44,507	3,714	20	32,373	218	4	682	3,446	570	265	3,553	100	14,925	12,446
1910	40,637	4,526	35	34,658	368	7	789	2,739	622	455	3,741	109	12,139	12,910
1911	42,978	2,952	54	39,541	388	4	501	3,679	606	393	3,512	110	14,030	16,255
1912	40,580	3,441	77	36,247	361	3	1,158	3,475	633	363	3,693	168	15,319	14,432
1913	43,689	3,702	66	43,643	598	2	1,750	2,346	885	410	3,720	127	13,480	13,218
1914	46,490	3,392	49	44,042	496	14	1,169	1,575	719	502	3,109	97	11,107	14,920
1915	42,997	4,263	25	39,152	256	141	74	3,607	491	680	4,954	162	11,359	4,532
1916	56,542	2,775	30	33,056	305	10	87	1,027	435	111	4,753	345	9,849	10,799
1917	70,539	364	9	23,085	945	6	1,018	(6)	232	(6)	1,260	211	5,687	1,534
1918	27,654	9	17	1	1,297	-	2,498	(6)	223	(6)	758	0	1,165	356
1919	88,349	7,346	8,202	780	3,483	-	8,201	2	4,927	4	5,804	465	11,421	5,172
1920	67,401	3,362	3,834	10,185	4,519	3	8,098	5	3,147	165	2,768	382	6,061	6,608
1921	73,733	3,026	1,373	7,044	4,089	2	7,560	29	1,157	256	1,636	210	6,186	9,009
1922	79,033	3,347	1,264	17,921	4,522	3	7,654	14	1,540	657	4,309	163	8,011	10,587
1923	69,349	3,235	1,142	18,617	1,828	6	5,826	26	1,962	697	3,453	534	9,507	11,371
1924	56,018	2,102	835	16,445	92	1,092	1,276	419	1,106	737	2,725	717	12,216	11,564
1925	52,278	2,284	1,353	21,541	127	1,129	1,467	468	1,301	702	1,913	368	12,852	8,479
1926	38,686	3,096	1,185	29,530	126	452	2,369	338	1,266	757	1,761	331	6,236	10,744
1927	29,542	2,644	844	21,653	84	98	2,511	25	1,452	894	2,127	554	8,601	13,067
1928	33,640	3,552	766	24,049	102	178	1,532	82	1,094	927	1,717	1,113	8,982	12,445
1929	30,705	3,957	451	23,253	119	995	1,352	1,191	841	1,347	1,542	641	8,545	12,716
1930	28,261	2,779	246	18,430	114	1,056	1,529	236	749	1,380	1,771	214	10,902	11,804
1931	21,561	2,503	305	15,040	134	1,153	381	1,629	562	2,905	1,835	237	9,944	10,028
1932	16,488	5,318	114	10,803	76	2,504	91	2,429	240	3,644	1,995	129	10,573	11,634
1933	11,074	6,849	236	7,040	88	2,581	146	904	195	3,819	1,807	439	8,973	14,745
1934	10,782	6,548	161	5,337	76	1,522	4	547	217	4,430	1,928	618	12,070	13,494
1935	10,988	6,818	352	6,577	(6)	922	5	416	254	3,167	2,312	203	10,982	13,709
1936	10,970	7,130	79	6,404	4	1,771	(6)	424	270	3,405	2,467	301	10,790	16,038
1937	13,361	6,527	90	8,350	1	1,838	(6)	443	430	3,708	2,247	279	14,477	14,670
1938	11,530	4,669	89	9,067	1	2,324	(6)	1,798	521	3,642	1,698	294	11,894	13,737

[1] Includes all meats and meat products.

[2] Includes fresh milk and cream, condensed milk, milk powder, and sterilized milk and cream. Of these, condensed milk and sterilized milk form by far the greater part.

[3] Eggs in shell only.

[4] Includes shoddy, 1914 and 1923-1931.

[5] Includes all kinds of hides and skins, both green and dry, of domestic animals only; furs not included.

[6] Less than 500.

Compiled from *Norges Handel.*

Norwegian imports are far more extensive and diversified than the exports. The largest volume of imports comes from European countries; but wheat is imported from Canada, meat, especially mutton, from Argentina, coffee from Brazil and Central America, fruit from Palestine, and a variety of commodities from the United States.

In 1938 the United States furnished about the following shares of total Norwegian imports: Cottonseed meal, one-third; dried fruits, practically all; rice, one-third; tobacco, three-fourths; cotton, nine-tenths; oils and paints, about one-half; copper, one-half; copper wire, four-fifths; autos and tractors, more than one-half; and radio and broadcasting equipment, fully one-fourth.[6]

The exports of Norway consisted almost entirely of products of the sea and the forest until recent years, when electrochemical and electrometallurgical products have played a large part.[7]

In 1909 the value of total exports from Norway was 234,641,000 kroner (about $62,790,000), of which products of the sea represented 25 percent, products of the forest 40 percent, electrochemical and matallurgical products 3 percent, and agricultural products 17 percent. In 1920 the value had risen to 1,185,032,000 kroner, with fish and fish products representing 17 percent, products of the forest 48 percent, electrochemical and metallurgical products 12 percent, and agricultural products 6 percent. In 1938 the total value from Norway was 773,776,000 kroner, of which fish and fish products represented 15 percent of the total export value, products of the forest 24 percent, electrochemical and metallurgical products 21 percent, and agricultural products 11 percent. Synthetic nitrate produced by combustion of nitrogen in the air is the most important electrochemical product. The exports of calcium nitrate in 1912 totaled 57,000 short tons. Exports of this product had expanded to 471,000 tons by 1936, and in 1938 totaled 446,000 tons.

Total exports of fish and fish products, fresh, dried, and canned, totaled more than 280,000 short tons in 1938. Of this tonnage, only a little more than 6 percent came to the United States. The largest single item exported to the United States was canned herring, amounting to 9,543 short tons. The United States takes about one-fourth of the cod-liver oil exported from Norway. Large quantities of iodine obtained from seaweed off the west coast are also exported.

Exports of wood pulp alone totaled 857,737 short tons in 1938, of which the United States took only 8 percent. During the past three decades, exports of wood pulp have not varied greatly from this figure. Of Norway's 1938 exports of "wood flour," the United States took 63 percent, or 6,618,000 pounds.

Compared with total agricultural exports from the United States, those going to Norway are a small part of the whole. The value of total exports from the United States in 1938 was $3,057,169,000 and of this sum the value of exports to Norway was only $22,466,000, or 0.7 percent of the total. This, however, represents a per-capita importation of American products into Norway of about $8. Though the

[6] *Norges Handel*, 1938, pp. 150-179.

[7] Thomson, Claudia, "Norway's Industrialization," *Economic Geography*, October 1938, pp. 378-379.

United Kingdom, which is the largest importer of American goods, took 17 percent of the total, it was equivalent to only about $11 per capita. Total exports of agricultural products from the United States in 1938 had a value of $827,546,000, and of this value $6,625,000, or 0.8 percent, went to Norway. This represents a per-capita importation of about $2. Agricultural exports from the United States to the United Kingdom were about 35 percent of the total, or $6 per capita for that country.

The United States trade with Norway, though not large in volume compared with total United States trade, is important from the standpoint of the proportion of the many different products imported into Norway that comes from the United States. The volume of imports is small principally because of the small Norwegian population, but the stability of the Norwegian market for American goods offsets. in large measure, the small volume.

From a social point of view, Norway's contribution to agriculture has been the close adherence of the rural population to the soil as a home, demonstrating the possibility of a high standard of living on limited resources. Contentment has been found in an appreciation of the scenic beauty of the country and the great outdoors in the summertime; in valley gatherings, outdoor sports, and dances in the winter; in extensive reading, handicraft work, and, in recent years, the radio. Farm life in Norway has been eased by the widespread use of electricity more than in any other country of the world. Electrical appliances have taken away much of the drudgery of everyday work in many farm homes, and this has given leisure and a broader, fuller life. Norwegian agriculture, so well adapted to the environment and economically successful, points the way to a more wholesome and, at the same time, a simpler way of life.

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BRITISH PRICE POLICY AND PRICE DEVELOPMENTS IN WARTIME . . . . .

By Harry L. Franklin*

Public interest becomes focused on prices and price policy to an unusual degree in wartime, inasmuch as the welfare of virtually every individual is directly involved therein. And the socio-economic groups - agricultural, labor, industrial - are likewise vitally affected by the price policy and by the price-control measures that the state adopts in wartime as national security measures. The significant features of the British price policy and the development of prices since the outbreak of the present war are discussed in this brief article.

MAIN FEATURES OF BRITISH PRICE POLICY

Avoidance of the tremendous rise in the cost of living that occurred during the World War is one of the chief objectives in the United Kingdom's price policy during the present conflict. This involves control by the Government of the prices of all essential raw materials and important foodstuffs. It is the policy of the Government to select as basic prices those obtaining during a specified period (depending on the product) in August 1939 shortly before the outbreak of hostilities. These prices are increased from time to time as additional costs make necessary, such as war-risk insurance, higher freight rates, wage increases, rise in international commodity prices, and sterling depreciation.

Price control, chiefly in the form of specified maximum prices, is coupled with Government control over stocks and supplies of virtually all essential raw materials and principal foodstuffs and with the licensing of dealers in such commodities. By virtue of its position as a leading customer in wartime, the Government, through its control over the prices and profit margins received by industry for all manufactured and semimanufactured goods delivered to public authorities, exercises a very strong influence on price policy and the general price level.

In addition to these direct controls, designed, among other things, to prevent profiteering and abnormal price rises, it may be pointed out that the Treasury exercises considerable influence on the prevailing price level through its general monetary policies, the allocation of foreign exchange, and the initiation of taxation proposals. In this connection, one of the chief aims of the Treasury, and of the Government in general, seems to be the prevention of inflationary movements, or at least the maintenance of such trends within reasonable limits.

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FOOD PRICE POLICY

Thus far the Government's policy of maintaining food prices at reasonable levels seems to have been fairly successful. The price regulations seem to have been well maintained, under the scrutiny of some 1,400 local Food Control Committees throughout the country. The availability of adequate foodstuffs at reasonable prices is, of course, a factor of paramount importance in maintaining the national morale in wartime.

More than 2 years ago the then Food (Defense Plans) Department announced that one of the chief aims in wartime would be to insure the supply of essential foodstuffs at such prices as would meet the requirements of all types of consumers in all parts of the country. Beginning with the outbreak of the present war or shortly thereafter, maximum permitted prices (wholesale and retail) were established by the Government for most of the important foodstuffs, such as cereal products, bacon and hams, certain other meat, imported lard, butter, eggs, sugar, dried fruits, and potatoes.[1] Many changes in the maximum permitted prices then established have in the meantime been made by the Ministry of Food, owing to new conditions, customary seasonal advances, and so on.

In order to prevent further increases in the retail cost of foodstuffs, the Government is spending about £1,000,000 ($4,000,000) per week, according to an announcement in Parliament on January 31, 1940, by the Chancellor of the Exchequer. Maintenance of the price level for bread, flour, meat, and milk accounts for the bulk of the weekly expenditure mentioned. This policy of the Exchequer's bearing the loss involved in maintaining the prices of staple food products against undue increase was adopted at the beginning of December. It is calculated to benefit wage earners and those with small fixed incomes, through what amounts to a consumer subsidy, but the Chancellor of the Exchequer pointed out that it might not be possible to continue this policy in all circumstances.

PRICES TO FARMERS

It is the policy of the Government to insure British farmers a fair return for their output. The Minister of Agriculture announced in Parliament on October 9, 1939, that the Government would buy the whole of staple crops sold off farms from the 1940 harvest at prices to be fixed in the light of prevailing circumstances. Farm prices will be fixed from time to time at fair levels, taking into account the changes in the cost of production and permitting reasonable returns. Producers' fixed prices for hogs, sheep, millable wheat, and potatoes have been revised upward, several times in some instances, since the outbreak of war.

Domestic farm output accounts for about 35 percent only of the United Kingdom's total food requirements, but the Government plans a substantial increase in production through the diversion of some 2 million acres of grassland into arable crops In this regard, the Minister of Agriculture in a Parliamentary speech on

[1] For comprehensive data, see the article "British Food Control" in *Foreign Agriculture*, December 1939.

December 14, 1939, said, "The Government recognize that if the desired increase in home production is to be secured, a higher level of prices will be necessary for agricultural products generally." He pointed out, however, that "naturally we must avoid extravagant or uncontrolled prices such as occurred in the last war. They * * * eventually brought disaster for agriculture." And early in the present war he emphasized, in a message to the National Farmers' Union, that it was in the general interest to prevent, so far as possible, the vicious spiral of rising costs, rising prices, and rising cost of living.[2]

British farmers' costs have increased substantially since the outbreak of war, and the upward trend will likely continue. The prices of feedstuffs and fertilizers are higher, and farm wage rates have increased in most parts of Great Britain. These trends foreshadow higher prices for farm products if the present price policy is maintained.

PRICES OF ESSENTIAL RAW MATERIALS

The Government's price policy in relation to industrial raw materials is similar to that applying to foodstuffs; namely, the prevention of profiteering and the maintenance of prices at the level immediately preceding the present war, plus the additions necessitated by changes in the meantime. These changes are, for the greater part, higher shipping costs, commodity war-risk insurance, sterling depreciation, and higher world market prices for imported materials of non-Empire origin.

Fourteen Commodity Controls, applying to as many commodities or commodity groups of industrial raw materials, have been established under the authority of the Ministry of Supply for controlling prices, supplies, and distribution. The major groups or products involved are iron and steel, nonferrous metals, aluminum, hemp and flax, silk and rayon, jute, wool, hides and skins, leather, paper, timber, ammonium sulphate and other fertilizers, sulphuric acid, and molasses and industrial alcohol. Cotton, rubber, and tin, however, are among the commodities for which "free" or uncontrolled prices have thus far obtained. Price revisions of the "controlled" commodities have been frequent, and the control system, on the whole, seems to have been sufficiently flexible to avoid friction and irritation, which would have been inevitable in a more rigid system.[3]

THE PRICES OF GOODS ACT, 1939

In order to protect the public against unwarranted increases in the retail prices of certain staple articles, the Prices of Goods Act, 1939 was enacted on November 16.[4] The articles involved will be specified in orders issued by the Board of Trade from time to time. The permitted price must not exceed the "basic" price obtaining on August 21, 1939, plus the amount justified by the unavoidable increases

[2] "British Farming in Wartime - Price Control," *The Statist* (London), January 13, 1940.

[3] "The Commodity Markets - Success of Control," *The Statist*, December 30, 1939.

[4] 2 and 3 Geo. 6., Ch. 118.

in costs and expenses since that date for the specified article. These permitted extra costs are set forth in detail in a schedule to the act and include additional price of materials, higher wages and salaries, war-risk insurance premiums, and increased transport and advertising charges. The act, however, does not involve any basic changes in the existing retail trade set-up.

The act will be administered by a Central Price Regulation Committee through the medium of local Price Regulation Committees. Complaints of price infractions will be investigated by the local committees and, if prosecution is considered necessary, the matter will be reported to the Central Committee and then to the Board of Trade. The Board of Trade will decide whether to institute public prosecution. The penalties for violation of the act are fairly severe. The Prices of Goods Act does not apply to food products, inasmuch as price supervision in this field is exercised by the local Food Control Committees and other agencies under the Ministry of Food.

In the first order issued by the Board of Trade specifying price-regulated articles, effective January 1, 1940, is listed a wide range of articles of clothing, dress materials, household textiles, domestic hardware, table cutlery, domestic glassware and pottery, electric flashlights and accessories therefor (including batteries and bulbs), and sand bags. Both the new act and the first order issued thereunder are intended to provide a channel of protest and complaint for honest resentment against excessive prices. How well the procedure will work in actual practice remains to be seen.[5]

PRICE DEVELOPMENTS SINCE AUGUST 1939

Wholesale prices of all articles in the United Kingdom averaged an increase of approximately 23 percent during the first 4 months of the present war, according to the monthly index prepared by the Board of Trade. For the group "food and tobacco," the increase was almost 33 percent during this period (September through December), and for "industrial materials and manufactures" a rise of 18.5 percent was registered.[6] Table 1 indicates month-by-month percentage increases and the aggregate increase over August 1939.

FOOD AND TOBACCO

Cereal prices in the aggregate had declined almost without interruption from the beginning of 1938 to August 1939. The average rise in cereal prices of 20.1 percent in September, however, following the outbreak of the war, was larger than for other foods. Increases the following 3 months were considerable for most of the cereals, but not so large as in September. An exception was straight-run flour, for which the control price was unchanged.

[5] *The Economist* (London), December 30, 1939.

[6] The data herein relating to wholesale-price index numbers in the United Kingdom is from the *Board of Trade Journal*, issue of January 11, 1940.

TABLE 1.—*Percentage increases in British wholesale price indexes, September-December 1939*

GROUP	INCREASE OVER AVERAGE OF PREVIOUS MONTH IN- SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	INCREASE OVER AUGUST AVERAGE IN DECEMBER
	Percent	*Percent*	*Percent*	*Percent*	*Percent*
Cereals	20.1	8.1	13.2	9.3	60.7
Meat, fish, and eggs	10.3	4.7	3.3	4.3	24.4
Other food and tobacco	7.8	10.4	1.7	0.7	21.8
Total food and tobacco	11.9	8.1	5.4	4.2	32.9
Coal	1.6	2.9	2.9	1.0	8.6
Iron and steel	[1] 0.4	1.4	8.7	0.4	10.3
Nonferrous metals	3.7	0.5	0.1	7.7	12.3
Cotton and products	21.5	4.2	3.4	14.8	50.4
Wool and products	5.1	8.3	8.6	3.5	27.9
Other textiles	9.9	10.2	8.8	4.7	37.9
Chemicals and oils	0.9	4.7	4.3	3.0	13.4
Miscellaneous	9.9	2.7	4.7	0.3	18.4
Total industrial materials and manufactures	5.4	3.4	5.9	2.6	18.5
Total all articles	7.6	5.0	5.7	3.2	23.2

[1] Decrease.

Meat, fish, and egg prices advanced 10.3 percent in September, or about one-half as much as cereal prices, and the monthly increases thereafter were much less. Bacon and ham prices advanced in October and November, when seasonal increases for eggs were also recorded. Prices of home-produced meat advanced as usual in December, but the rise for pork was exceptional.

In the miscellaneous food and tobacco group, substantial price rises occurred in September and November for imported butter and cheese. Seasonal variations in the prices of fruits and vegetables, which may have been increased by war conditions, were important. Two substantial increases were due to the increased duties (or excise) imposed late in September on sugar and tobacco equivalent to about 33 and 15 percent ad valorem, respectively. Tea prices were controlled, but coffee and cocoa prices advanced sharply in September, with a further rise for cocoa in December.

INDUSTRIAL MATERIALS AND MANUFACTURES

The heaviest price increases were for industrial materials and manufactures in the textile groups, as may be seen from table 1. For cotton and cotton textiles the increase from September through December was 50.4 percent over the August average, while that for the other two textile groups ("wool and products" and "other textiles") was 27.9 and 37.9 percent, respectively. Most of the increase in the cotton and cotton-textile group occurred in September and December; that for the

wool group, in October and November. The increases in "other textiles" in September and October were largely due to sharp rises for silk and hemp, and in November and December to jute price advances.

Coal registered the smallest total price increase (8.6 percent) for the first 4 months of the present war of any of the eight commodity groups under discussion, with the iron and steel group next (10.3 percent). Prices of the latter group were mostly unchanged until November. Among chemicals and oils, price increases were notable for palm-kernel oil, coal-tar products, and fuel oil. In the miscellaneous group, price advances were recorded for rubber, timber, hides and skins, and paper-making materials.

CERTAIN IMPORTED MATERIALS

The United Kingdom draws a large proportion of its industrial raw materials and certain foodstuffs from oversea sources. In order to illustrate further the trend of British wholesale prices during the first 4 months of the present war, the following table of price quotations has been compiled from various issues of *The Economist* (London), for some of the important oversea commodities.

For most of the commodities listed in table 2, it may be noted that the price increases registered during the first 4 months of the present war have been greater than the increase in the wholesale price index for industrial materials and manufactures shown in table 1.

TABLE 2.—*British wholesale prices for selected commodities from oversea sources, December 29, 1939, with comparisons*[1]

COMMODITY	UNIT	1939					1938
		Aug. 30	Sept. 27	Oct. 31	Nov. 28	Dec. 29	Dec. 28
Rubber, smoked sheets	Pound	8.75d.	9.75d.	11.25d.	11.19d.	11.63d.	8.19d.
Cotton, raw, American Middling	do.	5.49d.	6.77d.	6.26d.	7.6d.	8.78d.	5.22d.
Wool, tops 64's	do.	25.5d.	26.5d.	31.75d.	31.75d.	31.75d.	25d.
Jute, Daisee 2/3	Ton	£21:17:6	£30	£33	£42	£49:10:0	£18:17:6
Silk, Japan	Pound	13s.	12s.8d.	18s.6d.	18s.3d.	22s.9d.	8s.
Tin, Standard	Ton	£230	£229:10:0	£230	£230	£247:15:0	£215:10:0
Lead, soft foreign	do.	£16	£16:12:6	£16:12:6	£16:12:6	£25	£14:17:6
Mercury	Flask[2]	£16	£26:17:4	£27:2:3	£27:7:3	£37:6:3	£15:4:0
Hides, wet salted, Australian	Pound	4.5d.	4.75d.	7.75d.	6.5d.	6.75d.	4.38d.
Rosin, American	Ton[3]	£19	£19	£27:10:0	£25	£25	£14:10:0
Shellac, TN, orange	Cwt.	36s.	57s.	57s.	64s.	88s.	39s.
Turpentine	do.	50s.	50s.	57s.	60s.6d.	59s.6d.	33s.9d.
Cocoanut oil, crude	Ton	£16:10:0	£16:10:0	£22:2:6	£22:2:6	£22:2:6	£15:15:0
Cottonseed oil, crude	do.	£16:10:0	£16:5:10	£23	£26	£26	£19
Coffee, Costa Rica	Cwt.	62s.	92s.	95s.	92s.	92s.	60s.
Cocoa, Accra	do.	22s.	29s.	27s.	31s.	34s.	21s.6d.

[1] Average wholesale price in the customary United Kingdom market for the date indicated.

[2] Of 76 pounds.

[3] 112 pounds.

WAGES AND COST OF LIVING

Owing to the increase in the cost of living since the present war began,[7] there have been fairly widespread wage increases, which, in turn, have further contributed to price increases. At least 2 million workers were affected by the wage increases in September and October, and it is estimated that at least as many more are included in the increases subsequently granted in the building, furniture, and textile trades and in numerous miscellaneous industries. There is fairly widespread discussion in the United Kingdom of this situation and the adverse effects to be anticipated of an accelerating spiral of wages and prices.[8]

In fact, attention was directed toward the dangers of inflation, if the recurring spiral of wage increases and price advances was not checked, in the Parliamentary statement of the Chancellor of the Exchequer on January 31, 1940, in which it was pointed out that the Government was spending about £1,000,000 ($4,000,000) per week to check rises in food prices, a policy in effect since December 1, 1939.

The retail prices of the majority of foodstuffs seem to have risen by less than 10 percent during September-November 1939, or considerably less than the general rise in wholesale prices for foodstuffs during the same period, according to a survey by *The Economist*,[9] from which the following tabulation was taken. This represents a somewhat smaller increase than the general increase in the cost-of-living index for the same period.

I. *Increase exceeding 20 percent*

	Percent
Bacon	28
Fish	24
Sugar (granulated)	[a] 49
Butter, salt	23
Eggs	44

II. *Increase between 10 and 20 percent*

	Percent
Beef, chilled, thin flank	14
Mutton, U.K., breast	10
Mutton, frozen, breast	15
Cheese	18

III. *Increase of less that 10 percent*

	Percent
Beef, U. K.:	
Ribs	5
Thin flank	9
Beef, chilled, ribs	8
Mutton, U.K., legs	5
Mutton, frozen, legs	7
Flour	3
Bread	3
Tea	5
Milk	3
Margarine	2
Potatoes	3

[a] Rise partly due to increased tax.

A large share of the rising industrial activity in recent months has been devoted to the production of war materials, without a parallel increase in consumers'

[7] While the official index shows a rise in the cost of living between September 1 and December 1, 1939, of only 10 percent, this does not adequately reflect the actual increase, inasmuch as the index is based on purchasing habits before the last war (1914=100).

[8] "Wages and the War Effort," *The Economist* (London), December 16, 1939, and the *Manchester Guardian*, January 8 and 10, 1940.

[9] January 20, 1940.

goods to meet the enlarged total demand from labor.[10] At the same time, every effort is being made in Great Britain to maintain or possibly expand export markets in neutral countries. Moreover, enormously increased demand for war materials will doubtless occur if Germany actually embarks on the repeatedly threatened "total" war against the Allied powers. This would necessarily exert a strong influence on the British price and wage levels.

[10] The *New York Times*, February 3 and 4, 1940.

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